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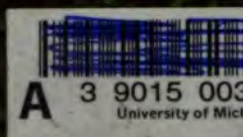
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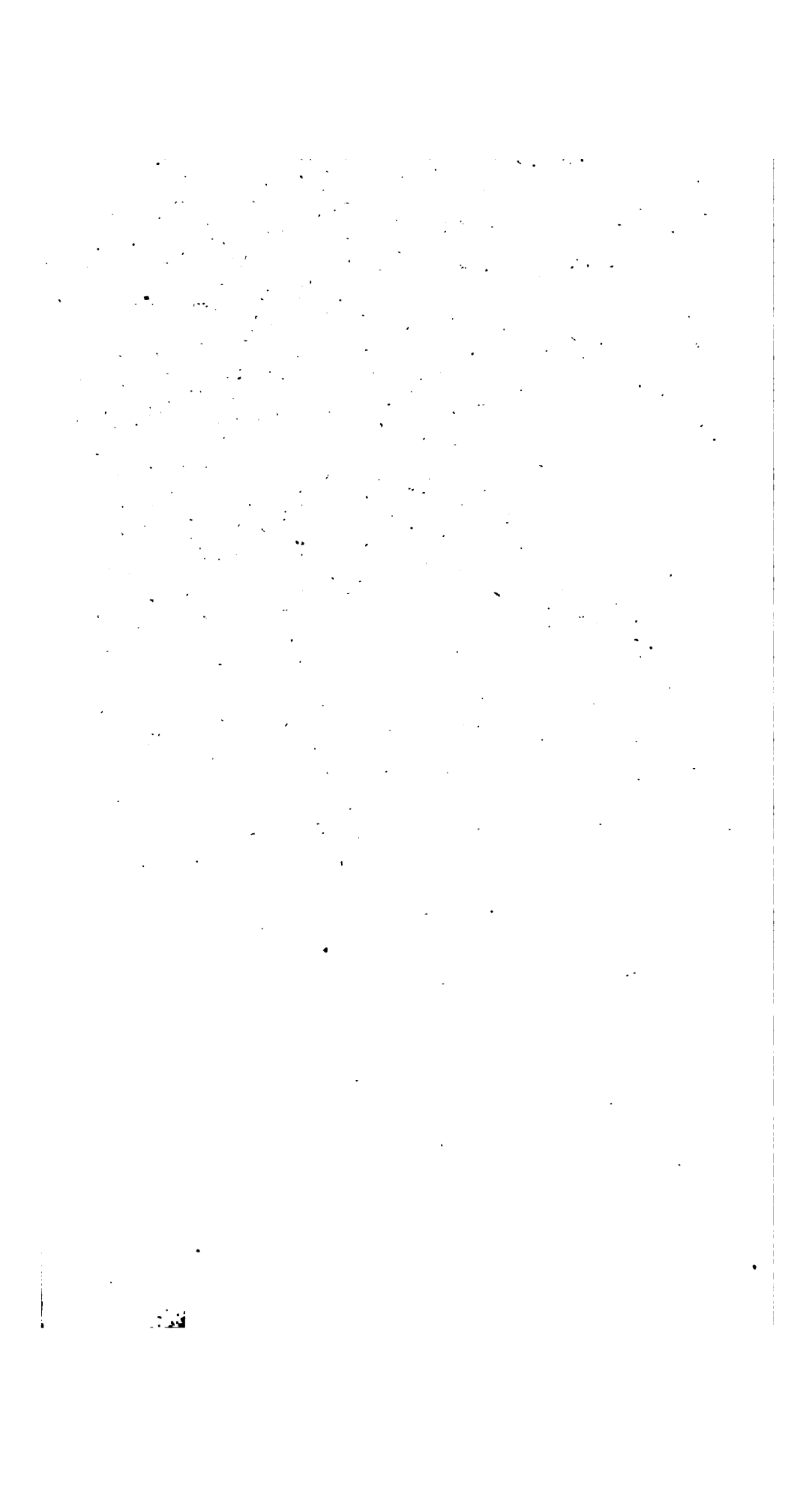
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THE BRITISH
GYNÆCOLOGICAL JOURNAL

VOL. XII.

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BEING THE JOURNAL OF
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VOL. XII.

EDITED BY

F. F. SCHACHT, M.D.



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 L. 1885 BUDIN, PIERRE, M.D., *Professor agrégé à la Faculté de Médecine de Paris, Accoucheur de la Charité*, 4, Avenue Hoche, Paris.

Elected.

- 1887 †BURFORD, GEORGE HENRY, M.B., C.M.Aber., 18, Wimpole Street, W.
F.F. †BURTON, J. E., M.A. (Hon.) Beloit, M.R.C.S., *Surgeon to the Liverpool Hospital for Women*, 64, Rodney Street, Liverpool.
Hon. Loc. Sec. C. 1884-6.
- 1887 BURY, EDWARD CHARLES, M.D. St. And., M.R.C.S., L.S.A., 5, York Row, Wisbech, Cambs.
- L.F.F. †BUXTON, DUDLEY WILMOT, M.D., B.S., M.R.C.P.Lond., *Anæsthetist to University College Hospital*, 82, Mortimer Street, Cavendish Square, W.
C. 1895-7.
- 1885 BYERS, JOHN WILLIAM, M.A., M.D., M.Ch. (Q.U.I.), M.R.C.S.E., L.M.K. and Q.C.P.I., *Professor of Midwifery and Diseases of Women and Children Queen's College, Belfast, and Physician for Diseases of Women to the Royal Hospital, Belfast*, Lower Crescent, Belfast.
Hon. Loc. Sec. C. 1893-5. V.P. 1897.
- 1894 BYFORD, HENRY T., M.D., 34, Washington Street, Chicago, Ills., U.S.A.
- 1895 CAFFERATA, ADOLPHUS M., M.D.Belgium, 5, Avenue du Marteau, Spa, Belgium.
- 1887 CALDWELL, W. SPENCER, M.D., Freeport, Ills., U.S.A.
- 1889 CALLAGHAN, JAMES LESLIE, L.R.C.P.Edin. and L.R.C.S.I., 13, Stoneleigh Terrace, Queen's Road, Coventry.
- F.F. †CAMBRIDGE, THOMAS ARTHUR, M.R.C.S.Eng., L.S.A., Stanley Lodge, Waltersville Road, Upper Hornsey Rise, N.
C. 1887-9. V.P. 1890-2.
- 1887 CAMERON, J. C., M.D., *Professor of Midwifery, McGill University*, 941, Dorchester Street, Montreal.
- 1895 CAMERON, MURDOCH, M.D., *Regius Professor of Midwifery and Diseases of Women in the University of Glasgow*, 7, Newton Terrace, Glasgow.
Hon. Loc. Sec.
- CAMPBELL, GRAHAM, Armagh Street, Christchurch, New Zealand.
- 1894 CAMPBELL, JOHN, M.A., M.D., M.Ch., M.A.O.R.U.I., F.R.C.S.Eng., *Senior Physician Samaritan Hospital for Women, Belfast*, 21, Great Victoria Street, Belfast.
- F.F. CAMPBELL, WILLIAM FREDERICK, L.R.C.P.Edin., L.F.P.S.G., L.S.A.Lond., Great Waking, Rochford, Essex.
- 1892 CANNADAY, C. G., M.D., Roanake, Virginia, U.S.A.
- L. 1886 CARSTENS, J. HENRY, M.D., Detroit, Michigan, U.S.A.
- 1891 †CARTER, A. J., M.R.C.S., 75, Shepherd's Bush Road, W.
- F.F. †CARTER, GEORGE ROE, M.R.C.P.I., L.R.C.S.I., Oakhurst, 2, Anerley Park, S.E.
- F.F. †CARVELL, JOHN MACLEAN, M.R.C.S., L.S.A., 3, Grove Villas, Nightingale Lane, Wanstead.
- F.F. †CASE, WILLIAM, M.R.C.S., L.S.A., Denmark House, Caistor-on-Sea, Norfolk.
- 1889 †CATTELL, G. TREW, M.D.Brux., L.R.C.P.Lond., M.R.C.S.Eng. and L.S.A., 30, Hereford Square, South Kensington, S.W.

- Elected.
 1895 †CAYLEY, CYRIL HENRY, M.A., M.B.Cantab., 17, Rosslyn Hill, Hampstead, N.W.
- 1895 †CHAMBERS, EBER, M.D.Aber., M.R.C.S., *District Medical Officer, City of London Lying-in Hospital*, 1, Wilmington Square, W.C.
- L. 1885 CHAMBERS, P. FLEWELLEN, M.D., 26, West Forty-seventh Street, New York, U.S.A.
- 1892 CHENEY, BENJAMIN AUSTIN, M.D., 40, Elm Street, New Haven, Connecticut, U.S.A.
- L. F.F. CHILD, EDWIN, M.R.C.S.E., Vernham, New Malden, Surrey.
- F.F. CLARK, JAMES FENN, M.R.C.S., L.S.A., Clent House, Beauchamp Square, Leamington.
- 1895 †CLARK, TOM, L.R.C.P., L.R.C.S.Edin., 1, Westbourne Street, Eaton Square, S.W.
- L. 1887 †CLARKE, THOMAS KILNER, F.R.C.S.Eng., M.D., M.A.Cantab., *Surgeon Huddersfield Infirmary*, 66, John William Street, Huddersfield. C. 1895-7.
- 1896 †CLAYTON, CHARLES HOLLINGSWORTH, M.R.C.S., L.R.C.P., 25, Broadhurst Gardens, South Hampstead, N.W.
- 1886 CLEGHORN, GEORGE, M.D.Dur., Blenheim, Marlborough, New Zealand. C. 1893-5.
- L. F.F. CLENDINNEN, FREDERICK JOHN, L.R.C.P.Lond., L.R.C.P. and S. Edin., Melbourne, Australia. Hon. Loc. Sec.
- F.F. †COFFIN, R. MAITLAND, F.R.C.P.Edin., 3, Westgate Terrace, Redcliffe Square, S.W.
- F.F. COGHILL, JOHN GEORGE SINCLAIR, M.D., F.R.C.P.Edin., *Physician Royal National Hospital for Consumption, Ventnor*, St. Catherine House, Ventnor, Isle of Wight. C. 1884-6. V.P. 1888-90.
- L. F.F. COLE, RICHARD BEVERLEY, M.D., A.M., M.R.C.S.Eng., Ph.D., San Francisco, California, U.S.A.
- F.F. †COLEMAN, CHARLES ALFRED, M.D.Edin., Hill View, Streatham Common, S.W.
- 1893 †COLENZO, ROBERT J., M.A., M.B.Oxon., M.R.C.S., 91, Cromwell Road, S.W.
- 1890 †COLLINS, E. TENISON, M.R.C.S., L.S.A., 12, Windsor Place, Cardiff. Hon. Loc. Sec. C. 1896-7.
- 1885 CONDON, JAMES HUNT, M.D. St. Andrews, M.R.C.S., L.S.A., L.M.Dublin, *Brigade Surgeon Indian Army Medical Department*, Cawnpore, India.
- 1892 †COOPER, JAMES, M.R.C.S., L.R.C.P.Lond., 1, Lancaster Terrace, Regent's Park, N.W.
- 1896 COOPER, WALTER, M.R.C.S., L.R.C.P., L.S.A., *Surgeon North Devon Infirmary*, The Square, Barnstaple.
- 1895 †CORBOULD, VICTOR A. L. E., M.D.Brux., M.R.C.S., L.R.C.P., 43, Victoria Road, Kensington, W.
- L. F.F. CORDES, AUGUSTE E., M.D.Paris, M.R.C.P.Lond., *Privat-Dozent of Midwifery, ex chirurgien ajoin à la Maternité*, 12, Rue Bellot, Geneva. V.P. 1897.

- Elected.
 1895 CRAIG, WILLIAM BEDFORD, M.D., *Visiting Gynaecologist to St. Luke's and St. Joseph's Hospital, Denver, and Professor of Gynaecology in the University of Denver Medical Department, 122, East Sixteenth Avenue, Denver, Colorado, U.S.A.*
- F.F. †CRAIGIE, JOHN HAMILTON, F.R.C.S.Edin., *Surgeon-Dentist to the Chelsea Hospital for Women, 13, Savile Row, w.*
- F.F. CRANNY, JOHN JOSEPH, M.D.Dub., A.B., F.R.C.S.I., *Surgeon to the Jervis Street Hospital, late Examiner in Midwifery, Royal College of Surgeons, Ireland, 17, Merrion Square, Dublin.*
- F.F. CREASE, J. ROBERTSON, F.R.C.S.Edin., 2, Ogle Terrace, South Shields.
- 1886 CRESWELL, PEARSON ROBERT, F.R.C.S.Ed., *Surgeon Merthyr General Hospital, &c., Dowlais, Merthyr Tydvil.*
- 1888 †CRICHTON, GEORGE, A.M. St. And., M.D.Edin., L.R.C.S.Edin., 1, The Barons, Twickenham, Middlesex.
- F.F. †CRIPPS, C. COUPER, M.D., M.R.C.S., 187, Camberwell Grove, Denmark Hill, S.E.
- 1888 †CRISP, ERNEST HENRY, B.A.Camb., L.R.C.P., M.R.C.S., The Lawns, Balham Hill, Clapham Common, S.W.
- 1891 CROMIE, JOHN, L.R.C.P. & S.Edin., 49, Stanley Street, Blyth, Northumberland.
- F.F. CROOM, JOHN HALLIDAY, M.D., F.R.C.P.E., F.R.C.S.E., F.R.S.E., *Physician to, and Clinical Lecturer on Diseases of Women Royal Infirmary, and Physician to the Royal Maternity Hospital, Edinburgh, 25, Charlotte Square, Edinburgh. C. 1884-6. V.P. 1887-9.*
- L. 1887 CROUZAT, E., M.D., *Professeur de Clinique d'Accouchements à la Faculté de Médecine de Toulouse, Toulouse, France.*
- 1895 CUFFE, Robert, M.R.C.S., L.S.A., Woodhall Spa, Lincoln.
- 1891 *CURRY, MATTHEW ALLISON, M.D.
- 1886 CUSHING, CLINTON, M.D., 636, Sutter Street, San Francisco, U.S.A.
- 1888 *CUTHBERT, WILLIAM WOOD, M.R.C.S.Eng., L.S.A.Lond.
-
- 1896 DARLEY-HARTLEY, WILLIAM, L.R.C.P.Ed., M.R.C.S.Eng., Central Chambers, East London, Cape Colony.
- 1895 †DAUBER, JOHN H., M.A., M.B., B.Ch.Oxon, *Assistant Physician Hospital for Women, Soho, 29, Charles Street, Mayfair, w.*
- F.F. †DAVIES, ELLIS THOMAS, M.D., *Senior Assistant Surgeon Hospital for Women, 97, Shaw Street, Liverpool.*
- 1892 DAVIES, W. J. F., M.D., Johannesburg, South Africa.
- 1892 DAVIS, W. E. B., M.D., 1806, Third Avenue, Birmingham, Alabama, U.S.A.
- 1897 †DELAMOTTE, PETER WILLIAM, M.R.C.P.Edin., M.R.C.S.E., Gresham Lodge, Staines, Middlesex.
- 1896 †DEVANE, THOMAS F., L.R.C.P. & S.Edin, Ashville, 23, Maple Road, Anerley, S.E.
- 1895 †DE JERSEY, WALTER BROCK, B.A., M.B., B.C.Cantab., Netherton, Guildford, Surrey.

- Elected.
 1885 DEMPSEY, ALEXANDER, M.D.Q.U.I., L.R.C.S.I., *Physician Mater Infirmorum Hospital*, 26, Clifton Street, Belfast.
- L. 1887 DEWES, FREDERICK JOSEPH, L.R.C.P.Lond., M.R.C.S.E., *Surgeon Captain Madras Army*, care of Messrs. Binney & Co., Madras, India.
- 1895 DICKINSON, ROBERT, L.M.D., 145, Clinton Street, Brooklyn, New York, U.S.A.
- 1886 †DICKSON, CHARLES COCHRANE, L.R.C.P. & S.Ed., Bowmont House, Willesden Lane, N.W.
- L. F.F. †DINGLE, WILLIAM ALFRED, M.D. St. And., L.R.C.P.Lond., M.R.C.S.Eng., L.S.A., *Surgeon Royal Maternity Charity*, 46, Finsbury Square, E.C. C. 1889-91. V.P. 1892-3.
- 1887 †DINGLEY, WILLIAM, M.R.C.S., L.S.A., 277, Camden Road, N. C. 1895-7.
- F.F. †DIXON, WILLIAM EDWARD, L.R.C.P.Ed., F.R.C.S.Ed., M.R.C.S., "Bridge Cot," Oulton Broad, Lowestoft.
- 1891 DODD, T. A., M.R.C.S., L.R.C.P.Ed., *Visiting Surgeon Newcastle-on-Tyne Workhouse Hospital*, 4, Eldon Square, Newcastle-on-Tyne.
- F.F. †DOLAN, THOMAS M., M.D., F.R.C.S.Edin., Horton House, Halifax, Yorkshire. C. 1886-8 & 1892-4. V.P. 1889-91.
- 1896 †D'OMBRAIN, ERNEST ARTHUR, M.B., B.S.Melb., 4, Endsleigh Gardens, N.W.
- 1895 †DONALD, ARCHIBALD, M.A., M.D.Edin., M.R.C.P.Lond., *Obstetric Physician Royal Infirmary, Manchester*, Platt Abbey, Rusholme, Manchester. C. 1897.
- 1897 DONALD, H. COLIGAN, M.B.Glas., Paisley.
- L. 1889 DOUGLAS, RICHARD, M.D., Nashville, Tennessee, U.S.A.
- 1895 †DOVE, PERCY WILLIAM, L.R.C.P., M.R.C.S., Carshalton, 34, Stapleton Hall Road, Stroud Green, N.
- 1896 †DOWNES, JOSEPH LOCKHART, M.B., C.B. (Glasgow), 271, Romford Road, E.
- F.F. †DRAKE-BROCKMAN, EDWARD FORSTER, F.R.C.S.Eng., L.R.C.P.Lond., 14, Welbeck Street, W.
- L. F.F. DRAPER, JAMES WILLIAM, L.R.C.P.Lond., M.R.C.S.Eng., L.S.A., Almondbury, Huddersfield.
- 1891 DRUMMOND, JAMES, M.D., Wyveston Lodge, South Shields.
- L. 1885 DUDLEY, EMILIUS CLARKE, A.B., M.D., *Professor of Gynecology Chicago Medical College*, 1617, Indiana Avenue, Chicago, U.S.A.
- 1889 DUKE, EDGAR, M.D.Dur., M.R.C.S.Eng., 40, Pevensy Road, St. Leonards-on-Sea.
- F.F. DUNDAS, MORDAUNT GEORGE, M.R.C.S., L.S.A., Litcham, Norfolk.
- 1896 †DUTCH, HENRY, M.D.Bru., L.R.C.P.Lond., 26, Berkeley Square, W.
- 1891 EASTES, THOMAS, M.D., F.R.C.S., 18, Manor Road, Folkestone.
- 1890 ECCLES, F. R., M.D., *Professor of Gynecology at the Western University*, Ellwood Place, London, Ontario, Canada.

Elected.

- 1894 †EDGE, FREDERICK, M.D., B.S., B.Sc.Lond., M.R.C.P.Lond.,
F.R.C.S.Eng., *Surgeon to the Wolverhampton Hospital for Women*,
Oakfield, Compton Road, Wolverhampton. C. 1897
- 1894 †EDWARDS, ROBERT, M.R.C.S., L.R.C.P.Lond., 23, Brunswick
Square, W.C.
- F.F. †ELDER, GEORGE, M.D., *Surgeon Samaritan Hospital for Women*,
Nottingham, 17, Regent Street, Nottingham. C. 1890-2. V.P. 1897.
- 1895 †ELIOT, ERNEST FRED, L.R.C.P. & S.Ed., *Surgeon Women's Hospital*,
Southampton, 13, East Park Terrace, Southampton.
- 1895 ELLIOT, H. SCOTT, M.R.C.S., L.R.C.P.Lond., Melrose, St. David's
Road, Southsea.
- 1894 EMMET, BACHE MCE., M.D., 18, East Thirtieth Street, New York,
U.S.A. Hon. Loc. Sec.
- 1892 ENGLEMAN, FREDK., M.D., Kreuznach, Germany.
- L. 1885 ENGLEMAN, GEORGE J., M.D., 336, Beacon Street, Boston, U.S.A.
- L. 1892 ENGSTRÖM, OTTO, M.D., Helsingfors, Finland.
- F.F. †ENSOR, EDWIN THOMAS, M.D.Univ.N.Y., L.R.C.P.I., &c., 162,
Ladbroke Grove, W.
- 1891 FARQUHARSON, JAMES DUNCAN, M.B., C.M.Glas., 242, Westgate
Road, Newcastle-on-Tyne.
- 1885 *FEARNLEY, WILLIAM, L.R.C.P.Lond., M.R.C.S.Eng.
- 1891 FEHLING, PROFESSOR, M.D., 15, Magdeburger Strasse, Halle.
- L. 1886 FENGER, CHRISTIAN, M.D., 269, La Salle Avenue, Chicago, Illinois,
U.S.A.
- 1894 †FENTON, FREDERICK ENOS, F.R.C.S.E., M.R.C.P.Edin., Langstone,
Uxbridge Road, Ealing, W.
- 1896 †FENWICK, BEDFORD, M.D.Durh., M.R.C.P.Lond., *Physician to the
Hospital for Women*, 20, Upper Wimpole Street, W.
- 1893 †FERGUSON, GEO. GUNNIS, M.B., C.M.Glas., 62, Holmdale Road,
West Hampstead.
- 1895 FERGUSON, JAMES HAIG, M.D., F.R.C.P.E., 25, Rutland Street,
Edinburgh.
- 1891 *FIELDEN, SAMUEL, M.D.
- 1893 FINDLAY, WILLIAM, A.M., M.B., C.M.Aber., 475, Union Street,
Aberdeen, N.B.
- L. F.F. FITZGERALD, CHARLES EGERTON, M.D., West Terrace, Folkestone.
C. 1888-9.
- 1895 FITZGERALD, WILLIAM ALEXANDER, M.D., B.A.Dublin, F.R.C.S.,
Villa Ciro, Monte Carlo.
- 1892 *†FLYNN, E. J. MOFFAT, F.R.C.S.Edin.
- 1885 FRASER, GREME BISDEE, M.R.C.S., L.S.A., Belvidere, Weston-
super-Mare.
- 1885 FULLER, LEEDHAM, M.R.C.S.Eng., L.S.A.Lond., Streatham Hill, S.W.

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- Elected.
 1889 †GALLOWAY, A. RUDOLPH, M.A., M.B., C.M.Aberd., 207, Union Street, Aberdeen. Hon. Loc. Sec.
 1895 †GALLOWAY, ARTHUR W., L.R.C.P., M.R.C.S., 79, New North Road, N.
 F.F. †GARDINER, BRUCE HUBERT JOHN, M.D., L.R.C.P.Edin., M.R.C.S., Gloucester House, Barry Road, East Dulwich, s.e.
 1894 †GARDNER, HAROLD BELLAMY, M.R.C.S.Eng., L.R.C.P.Lond., *Anæsthetist Charing Cross Hospital*, 11A, Welbeck Street, w.
 F.F. GARDNER, WILLIAM, M.D., *Professor of Gynaecology in McGill's University*, 109, Union Avenue, Montreal, Canada. V.P. 1887-9.
 1891 GARDNER, WILLIAM, M.D., 5, Collins Street, Melbourne, Australia.
 1895 †GEORGE, WM. HOTTEN, M.R.C.S.Eng., L.R.C.P.Ed., 9, Osnaburgh Street, N.W.
 1891 GIBB, C. J., M.D., *Consulting Surgeon Newcastle-on-Tyne Infirmary*, Westgate Street, Newcastle-on-Tyne.
 1895 GIFFARD, H. E., M.R.C.S., Denham House, Egham, Surrey.
 1893 †GILES, ARTHUR E., M.D., B.Sc.Lond., M.R.C.P., *Physician to Out-Patients, Chelsea Hospital for Women*, 58, Harley Street, w.
 L. 1885 GILES, PETER, M.R.C.S., L.R.C.P., The Quinta, Brobury, Hereford.
 F.F. †GIMSON, THOMAS STEVENS, M.R.C.S., 32, Fitzroy Square, w.
 1895 †GODFREY, F., L.R.C.P. & S.Edin., Glendower House, Compton Terrace, Highbury, N.
 1891 †GODSON, CLEMENT, M.D., M.R.C.P., *Consulting Physician to the City of London Lying-in Hospital, late Assistant Physician Acch. St. Bartholomew's Hospital*, 9, Grosvenor Street, w.
 C. 1892-4 & 1897. Pres. 1895-6.
 1891 GOGGANS, J. A., M.D.N.Y., Alexander City, Alabama, U.S.A.
 F.F. GOLDSMITH, GEORGE POCKOCK, M.D., 3, Harpur Place, Bedford.
 C. 1891-3.
 1896 †GOODALL, CHARLES EDWIN, M.B., B.S.Melb., c/o British Medical Association, 429, Strand, w.c.
 1891 GOWANS, WILLIAM, M.D., F.R.C.S.Edin., Westoe House, Westoe, South Shields.
 1896 †GRANT, WILLIAM FRANCIS, M.D.Edin., 443, Mile End Road, E.
 1895 †GRAY, JOHN, M.D.Aber., M.R.C.S., 95, St. James's Road, Upper Tooting, s.w.
 1896 GRAY, WILLIAM, M.B. and C.M.Edin., Church Square, West Hartlepool.
 1896 GREEN, WILLIAM EDWARD, M.R.C.S.Eng., L.S.A., Belgrave House, Sandown, Isle of Wight.
 1891 GREEN, W. O., M.D., 709, 2nd Street, near Chestnut, Louisville, Kentucky, U.S.A.
 F.F. †GRIFFITH, G. DE GORREQUER, L.R.C.P., M.R.C.S., *late Senior Physician to Hospital for Women and Children, Pimlico*, 34, St. George's Square, s.w., and New Indian Club, Whitehall Gardens, s.w.

Elected.

- F.F. †GRIGG, W. CHAPMAN, M.D., M.R.C.P., *Physician to Queen Charlotte's Hospital, late Assistant Obstetric Physician to the Westminster Hospital*, 27, Curzon Street, Mayfair, w.
C. 1884-6 & 1892-4. Hon. Sec. 1886-7. V.P. 1888-90. Pres. 1891.
- L. 1885 †GRIMSDALE, THOMAS BABINGTON, B.A., M.B.Cantab., M.R.C.S., *Assistant Surgeon Hospital for Women, Liverpool*, 29, Rodney Street, Liverpool. Hon. Loc. Sec. C. 1894-6.
- L. 1888 GUSTAV, DIRNER, M.D., 9, Kossuth utoca, Buda Pesth, Hungary.
-
- 1885 HACKNEY, JOHN, M.D., M.R.C.S., L.S.A., Oaklands, Hythe, Kent.
- 1895 HALL, ERNEST AMOS, M.D., C.M.Ont., L.R.C.P.Ed., Victoria, British Columbia.
- L. 1885 HALL, RUFUS B., M.D., 37, Crown Street, Walnut Hills, Cincinnati, U.S.A.
- 1893 †HALL, WILLIAM WINSLOW, M.D., 195, Belsize Road, Kilburn, n.w.
- L. 1886 HANKS, HORACE TRACY, M.D., 766, Madison Avenue, New York, U.S.A.
- 1897 †HARLEY, HENRY, M.D., R.U.S., 27, Victoria Road, Battersea Park, s.w.
- F.F. HARRIES, THOMAS DAVIES, M.R.C.P.Lond., F.R.C.S.Eng., *Surgeon Aberystwith Infirmary and Cardiganshire General Hospital*, Grosvenor House, Aberystwith.
- F.F. HASLAM, WM. DOIGE, M.D.Bru., M.R.C.S.Eng., L.S.A., Maywood, Christchurch Road, Bournemouth.
- F.F. †HAULTAIN, FRANCIS WM. NICOL, M.D., F.R.C.P.Ed., *Physician for Diseases of Women, Royal Dispensary, Lecturer on Midwifery and Diseases of Women Edinburgh School of Medicine*, 17, Rutland Street, Edinburgh. Hon. Loc. Sec. C. 1896-7.
- 1889 HAWKES, A. E., M.D., L.R.C.P.Edin., L.R.C.S.Edin. and L.M., 22, Abercromby Square, Liverpool.
- 1891 HAWKINS-AMBLER, G. A., F.R.C.S.Edin., 200A, Upper Parliament Street, Liverpool.
- L. 1886 HEADLEY, W. BALLS, M.A., M.D., F.R.C.P., 4, Collins Street, Melbourne, Australia. C. 1896-7.
- 1887 HEALD, BENJAMIN GREY, L.R.C.P.Ed., L.F.P.S.G., Red House, East Street, Leeds.
- F.F. †HERBERT, PAUL ZOTIQUE, M.D., C.M.McGill, L.R.C.P.Lond., 54, Berners Street, Oxford Street, w. C. 1896-7.
- L. 1885 HEIBERG, WILHELM, M.D., *Surgeon to the County Hospital of Copenhagen, Frederiksberg*, Copenhagen.
- 1896 HENRY, THOMAS JAMES, F.R.C.S.Ed., c/o L. Bruck, 13, Castlereagh Street, Sydney, Australia.
- L. 1887 HETHERINGTON, GEO. ALBERT, M.D., St. John, N.B., Canada.
- F.F. †HICKS, GEORGE BORLASE, M.R.C.S.Eng., L.R.C.S.Edin., 149, Amherst Road, Hackney Downs, n.e.
- 1891 †HILL, J. STONELEY, M.B. and C.M.Edin., 33, Great Charlotte Street, Blackfriars, s.e.

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- F.F. †HILLS, AUGUSTUS PHILLIPS, M.R.C.S.Eng., Carlton House, Prince of Wales Road, Battersea Park, s.w. C. 1888-9.
- F.F. †HINE, ALFRED LEONARD, L.R.C.P.Lond., M.R.C.S., L.S.A., Eppingdale, Leytonstone Road, E. C. 1891-2.
- L. 1887 HOAG, JUNIUS C., M.D., 58, 43rd Street, Chicago.
- 1896 HOBSON, WILLIAM HENRY, M.R.C.S., L.S.A., 38, Leinster Gardens, Lancaster Gate, w.
- F.F. †HODGSON, ROBERT HUGH, L.R.C.P.Edin., M.R.C.S.Eng., 204, Rye Lane, Peckham, s.e. C. 1894-7.
- F.F. †HOLLAND, EDMUND, M.D., M.R.C.P., F.R.C.S., *Physician to the Hospital for Women*, 1, Titchfield Terrace, North Gate, Regent's Park, n.w. C. 1893-5.
- 1895 †HOLLAND, E. C., M.B., C.M.Ed., "Airdrie," The Avenue, Kew Gardens, Surrey.
- L. 1885 HOOPER, JOHN WILLIAM DUNBAR, L.R.C.P.Edin., L.R.C.S.Edin., *Surgeon to the Women's Hospital, Melbourne*, 54, Collins Street, East, Melbourne.
- 1895 †HOUCHIN, EDMUND KING, L.R.C.P. and S.Ed., L.S.A., *District Surgeon, Royal Maternity Charity of London, Deputy Coroner, East London Division*, Durham House, High Street, Stepney, E.
- F.F. HOWELL, HORACE SYDNEY, M.D., F.R.C.S., East Grove House, 18, Boundary Road, South Hampstead, n.w.
- 1887 HUTCHINSON, GEORGE WRIGHT, M.D.Aber., M.R.C.P.Edin., Chipping Norton, Oxon.
- F.F. †ISDELL, FITZGERALD, M.A., M.D.Dub., 189, Shaftesbury Avenue, w.c.
- F.F. JACKSON, THOMAS VINCENT, F.R.C.S.Edin., *Senior Surgeon to the Wolverhampton and Staffordshire General Hospital*, Whetstone House, Wolverhampton. C. 1884-6.
- 1895 JAMES, STANLAKE, L.R.C.P., M.R.C.S., Violet Hill, Simla, India.
- F.F. †JAMES, W. CULVER, M.D., 15, Marloes Road, Kensington, w. C. 1884-6.
- 1894 †JARDINE, JAMES, M.B.Edin., C.M., 30, Sheen Road, Richmond, Surrey.
- F.F. JAY, HENRY MASON, M.D.Aberd., F.R.C.S.Ed., Chippenham, Wilts.
- 1891 †JAYNES, V. A., M.R.C.S.Eng., L.S.A., 157, Jamaica Road, Bermondsey.
- 1887 †JESSETT, FREDERICK BOWREMANN, F.R.C.S.Eng., *Surgeon to the Cancer Hospital, Brompton*, 1, Buckingham Palace Mansions, Grosvenor Gardens, s.w. C. 1891-2 & 1894-7. Pres. 1893.
- L. 1885 JEWETT, CHARLES, M.D., 330, Clinton Avenue, Brooklyn, U.S.A.
- 1897 JOHNSTON, G. J. WALDRON, M.D.R.U.I., Oswald House, Nether Hall Road, Doncaster.
- 1886 JOHNSTON, JOHN, M.R.C.S.Eng., 2, Rocky Hill Terrace, Maidstone.
- L. 1886 JOHNSTONE, ARTHUR W., M.D., Madisonville Road, Cincinnati, Ohio.

- Elected.
- 1891 JOHNSTONE, GEORGE W., L.R.C.P., Government Medical Officer, West Coast Presidency, Kudas, British North Borneo.
- 1894 †JOHNSTONE, RALPH W., M.D., B.Ch., B.A.O., 1, Watson Place, Hans Place, s.w.
- 1887 JONES, C. N. DIXON, M.D., 502, West 142nd Street, New York.
- 1894 JONES, D. MARINUS, M.D., M.Ch.Edin., Beechwood, Victoria Road, Aldershot.
- F.F. †JONES, H. MACNAUGHTON, M.D., M.Ch.Q.U.I., M.A.O., F.R.C.S.I. and Edin., late Examiner in Midwifery Royal University, Ireland, and Professor of Midwifery, Queen's College, Cork, 141, Harley Street, w. C. 1890-2. V.P. 1895-7.
- 1895 †JONES, J., L.R.C.P., M.R.C.S., Claremont, Newlands Park, Sydenham, s.e.
- F.F. †JONES, LEWIS, M.D., M.R.C.S., Oakmead, Balham, s.w. C. 1894-6.
- 1893 †JORDAN, JOHN FURNEAUX, M.B.R.U.I., F.R.C.S.Eng., Surgeon Women's Hospital, Birmingham, 114, Edmund Street, Birmingham.
- 1885 JOUBERT, CHARLES HENRY, M.B.Lond., F.R.C.S.Eng., Surgeon Lieut. Colonel I.M.S., Professor of Midwifery and Obstetric Physician, Medical College, Calcutta, 6, Harrington Street, Calcutta.
- 1895 †KEITH, GEORGE E., M.B., C.M.Ed., 42, Charles Street, Berkeley Square, w. Hon. Sec. 1897.
- 1894 †KEITH, SKENE, M.B., C.M.Edin., F.R.C.S.E., 42, Charles Street, Berkeley Square, w. C. 1897.
- L. 1889 KELLOGG, J. H., M.D., Battle Creek, Michigan, U.S.A.
- 1891 †KEMPSTER, WM. H., M.B.Durh., 2, Queen Anne Terrace, Albert Road, Battersea Park, s.w.
- F.F. †KENNEDY, JOHN BLYDESTYN, M.R.C.S.Eng., L.S.A., Stratford Hall, Stratford, Essex.
- F.F. †KIALLMARK, HENRY WALTER, M.R.C.S., 5, Pembroke Gardens, Bayswater, w.
- L. 1886 KING, ALBERT F. A., M.D., 1315, Mass. Avenue, n.w., Washington, D.C., U.S.A.
- 1893 KIRKLEY, C. A., M.D., 141, 11th Street, Toledo, Ohio, U.S.A.
- F.F. KNOTT, CHARLES, M.R.C.P.Edin., Liz Ville, Elm Grove, Southsea.
- F.F. †LAMPREY, RICHARD ORFORD, L.R.C.P. and L.R.C.S.Edin., 62, East Hill, Wandsworth, s.w.
- 1890 *LANKFORD, DR. LIVIUS.
- 1895 LAVERS, T. G. JEFF, L.S.A., Edenburg, Orange Free State, S. Africa.
- L. 1886 †LAWRIE, JAS. MCPHERSON, M.D., Physician to the Weymouth Sanatorium, Greenhill, Weymouth. C. 1894-6.
- 1894 LEAHY, ALBERT WILLIAM DENIS, M.D.Durh., F.R.C.S., Officiating Professor of Midwifery and Obstetric Physician Eden Hospital, Calcutta, 6, Elysium Row, Calcutta.
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- 1893 †LEHANE, DANIEL, M.D., M.Ch., R.U.I., 29, Egerton Crescent, s.w.
- 1889 LEIGH, W. W., L.R.C.P.Edin. M.R.C.S.Eng., L.S.A., Glyn Bargoed, Treharris, R.S.O., South Wales.
- L. F.F. LE PAGE, JOHN FISHER, M.D., L.R.C.P.Edin., 17, The Crescent, Salford, Manchester.
- F.F. LESLIE, WILLIAM MURRAY, M.D.Edin., C.M., F.R.C.S.E., 41, Glengall Road, Cubitt Town, E.
- F.F. †LEWIS, HENRY, M.D.Bru., M.R.C.S., West Terrace, Folkestone.
C. 1895-7.
- F.F. †LIGERTWOOD, THOMAS, M.D., F.R.C.S.Edin., Royal Hospital, Chelsea, s.w.
C. 1892-3.
- 1891 LLOYD, H. J., L.R.C.P.Edin., L.F.P.S.Glas., Tynycoed, Barmouth, North Wales.
- F.F. †LLOYD, SAMUEL, M.D., 4, High Street, Bloomsbury, w.c.
- 1893 LLOYDE, JOHN HY., L.R.C.P., L.R.C.S.Edin., 6, Harpur Place, Bedford.
- 1885 *†LONG, FREDERICK WILLIAM DEVERREUX, L.S.A.
- 1895 *LONG, RICHARD PATRICK, L.F.P.S.Glas., L.S.A., 99, Queen's Crescent, Haverstock Hill, n.w.
- F.F. †LOW, RICHARD MARSDEN PILKINGTON, M.B., C.M.Edin., L.R.C.P. Edin., L.R.C.S.Edin., L.M., 70, Philbeach Gardens, s.w.
C. 1896-7.
- 1895 †LUCY, WM. CUBITT, M.D.Aberd., M.R.C.S., Penrose House, Rosslyn Hill, Hampstead, n.w.
- L. 1885 LUSK, WILLIAM T., M.D., 47, East Thirty-fourth Street, New York, U.S.A.
V.P. 1887-9.
- 1894 LUTAUD, AUGUSTE, M.D.Paris, *Redacteur en Chef du Journal de Médecine de Paris; Médecine Adj. de l'Hôpital St. Lazare*, 47, Boulevard Haussmann, Paris.
- F.F. †LYCETT, JOHN ALLAN, M.D.St. And., M.R.C.P.Edin., *Surgeon Wolverhampton and District Hospital for Women*, Gatcombe, Wolverhampton.
Hon. Loc. Sec. C. 1889-91.
- F.F. MACAN, ARTHUR VERNON, B.A., M.B.Dub., M.Ch., M.A.O., F.R.C.P.I., *King's Professor of Midwifery, Trinity College; Obstetric Physician Sir P. Dunn's Hospital; Ex-Master of the Rotunda Hospital, Dublin*, 53, Merrion Square, Dublin.
V.P. 1887-8. Pres. 1889. C. 1890-2.
- L. 1885 †MACAN, JAMESON JOHN, M.A., M.D.Cantab., M.R.C.S., 62, George Street, Portman Square, w.
C. 1895-7.
- F.F. MACCALLUM, DUNCAN C., M.D., 45, Union Avenue, Montreal, Canada.
- 1895 MACDONALD, JAMES, M.D.Ed., Bloxwich, Walsall, Staffs.
- F.F. †MACGAVIN, JOHN, L.R.C.P. and S.Edin., 72, Trafalgar Road, Greenwich, s.e.
- 1895 MACGREGOR, ANGUS VALLANCE, M.B.Edin. and C.M., Milton House, West Hartlepool.
- 1897 MACGREGOR, P., F.R.C.S.Ed., Rushcliffe, Huddersfield.

- Elected.
 L. 1889 MACKAY, W. A., M.D.Edin., F.R.C.S.Edin., Huelva, Spain.
 L. 1888 MACKINTOSH, G. D., L.R.C.P.I., L.M.Ed., Fairford House, Lower Kennington Lane, S.E.
 1886 MACPHERSON, CHARLES, M.D.Glas., 51, Queen Street, Edinburgh.
 1894 MADDIN, JOHN WASLEY, Junr., M.D., Nashville, Tennessee, U.S.A.
 1894 MANSEL, EDWARD L., M.B., C.M.Aber., The Caen, Ashted, Surrey.
 1888 MANTON, WALTER PORTER, M.D., 32, Adams Avenue, w., Detroit, Mich., U.S.A.
 1887 MARLEY, HENRY FREDERICK, M.R.C.S.E., L.R.C.P., L.S.A., L.M., The Nook, Padstow, Cornwall.
 1895 MARTIN, CHARLES, M.B., C.M.Ed., Cleveland House, 35, George Road, Edgbaston, Birmingham.
 1891 MARTIN, CHRISTOPHER, M.B.Edin., C.M., F.R.C.S.Eng., *Surgeon Birmingham and Midland Hospital for Women*, 103, Newhall Street, Birmingham. Hon. Loc. Sec. C. 1897.
 1896 †MARTIN, CHARLES RUDINGE, L.R.C.P. and S.Edin., 89, Eaton Terrace, S.W.
 F.F. MASSON, GEORGE BLAKE, L.R.C.P. and S.Edin., L.M., Holly House, Downham Market.
 1896 MATTICE, RICHARD ISA, M.D.McGill., L.R.C.P.Lond., Omaha, Nebraska, U.S.A.
 1895 †MAY, EDWIN HOOPER, M.D.St. And., F.R.C.S., 14, Finsbury Circus, E.C., and Tottenham High Cross, Middlesex.
 1896 MAYBURY, LYSANDER, M.D.R.U.I., M.Ch., M.R.C.S.Eng., 9, Hampshire Terrace, Southsea.
 1892 McMURTRY, L. S., M.D., 231, West Chestnut Street, Louisville, Kentucky, U.S.A.
 1891 MEARNS, WILLIAM, M.A., M.D., *Physician Children's Hospital, Gateshead-on-Tyne*, 22, Bewick Road, Gateshead-on-Tyne.
 1891 MEEK, H., M.D., 331, Queen's Avenue, London, Ontario, Canada.
 1887 MENDES DE LEON, M.A., M.D., Sarphati Straat, 1H, Amsterdam. C. 1892.
 L. 1886 MERRIMAN, HENRY P., M.D., 2239, Michigan Avenue, Chicago, U.S.A.
 1896 METCALFE, JAMES, M.B.Bru.x., L.R.C.P. and S.Edin., 8, Heaton Grove, Bradford, Yorks.
 1896 †MICHELL, J., M.R.C.S., L.S.A., 11, De Vere Gardens, Kensington Palace, W.
 1891 MICHIE, H., M.B.Aber., C.M., *Surgeon to the Samaritan Hospital*, 27, Regent Street, Nottingham. C. 1894-6.
 1895 †MICKLE, ARTHUR W. T. F., M.B., C.M.Edin., 549, Commercial Road, E.
 1895 †MILLER, FREDK. R., M.D.Bru.x., L.R.C.P.Lond., 31, Shepherd's Bush Road, W.
 L. 1886 MILLER, DE LASKIE, M.D., *Professor of Obstetrics, Rush Medical College*, 446, Chestnut Street, Chicago, U.S.A.
 1896 MINCHIN, P. DUNDAS, L.R.C.P. and S.Edin., Grange House, Godalming, Surrey.

List of Fellows of the

- Elected.
 1892 MOLSON, CAVENDISH, L.R.C.P., 13, Lingfield Road, Wimbledon.
 1896 MORGAN, THOMAS HOWARD, M.D., F.R.C.S.Ed., Gympie, Queensland, Australia.
 1887 MORISON, ALBERT EDWARD, M.B., C.M.Ed., F.R.C.S.Edin., Hartlepool.
 1891 MORISON, J. RUTHERFORD, M.B., F.R.C.S., *Assistant Surgeon Newcastle-on-Tyne Infirmary*, 14, Saville Row, Newcastle-on-Tyne.
 C. 1894-6.
 1894 MORLAND, CHARLES HENRY DUNCAN, M.B., B.S.Durh., M.R.C.S., 5, Dumfries Place, Cardiff.
 F.F. †MORTON, THOMAS, M.D.Lond., M.R.C.S., L.S.A., *Ex-President of the Harveian Society of London*, 15, Greville Road, Kilburn, N.W.
 C. 1889-90.
 F.F. †MOULLIN, J. A. MANSELL, M.A., M.B.Oxon., M.R.C.P., *Physician to the Hospital for Women, Scho, Physician for Diseases of Women to the West London Hospital*, 69, Wimpole Street, W.
 C. 1884-6. Hon. Sec. 1887-8. V.P. 1889-91. Libr. 1892. Treas. 1893-7.
 1895 MOYNIHAN, BERKELEY G. A., M.B., M.S.Lond., F.R.C.S., 33, Park Square, Leeds.
 L. 1885 MUNDÉ, PAUL F., M.D., *Professor of Gynaecology at the New York Polyclinic, and at Dartmouth College*, 20, West Forty-Fifth Street, New York, U.S.A.
 F.F. MUNRO, ROBERT H., M.B., C.M.Edin., Freiockheim, Arbroath, Forfarshire.
 F.F. MURPHY, JAMES, M.A., M.D.Dub., *Surgeon to the Sunderland Infirmary, Lecturer on Medical Jurisprudence, University of Durham*, Holly House, Sunderland. Hon. Loc. Sec. V. P. 1892-4.
 1896 MURRAY, CHAS. F. K., M.D., R.U.I., F.R.C.S., Kenilworth, Cape Town, S. Africa.
 1885 MURRAY, ROBERT MILNE, M.A.St. And., M.B.Edin., F.R.C.P.Edin. F.R.S.E., *Assistant Physician Maternity Hospital; Lecturer on Midwifery and Gynaecology, Edinburgh School; Physician for Diseases of Women to the Western Dispensary*, 11, Chester Street, Edinburgh.
 C. 1886-8.
 1891 MURRAY, W., M.D., F.R.C.P., *Consulting Physician Newcastle-on-Tyne Hospital for Sick Children*, 9, Ellison Place, Newcastle-on-Tyne.
 F.F. MUTCH, F. ROBERTSON, M.D., C.M.Aberd., "Strathgairn," Goldsmith Street, Nottingham.
- 1891 NAPIER, A. D. LEITH, M.D., M.R.C.P.Lond., F.R.S.Edin., *late Physician Royal Maternity Charity of London, Examiner in Midwifery and Gynaecology, Apothecaries' Hall*, General Hospital, Adelaide, South Australia.
 C. 1892. Hon. Sec. 1893-4. Editor 1894-6. V.P. 1895-7.
 1895 *†NAPIER, THOS. WM. A., M.D., M.C., *Hon. Surgeon Seacombe Cottage Hospital and Wallasey Dispensary*.
 1889 †NAUMANN, J. C. FRANCIS, M.D.Brux., L.R.C.P.Lond., M.R.C.S. Eng., *Physician Italian Hospital*, 125, Gower Street, W.C.

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 1894 †NEATBY, EDWIN A., M.D.Brux., L.R.C.P.Lond., 19, Upper Wimpole Street, w.
 1891 NEDWILL, COURTNEY, M.D., Christchurch, Canterbury, New Zealand.
 L. 1886 NELSON, DANIEL THURBER, M.D., 2400, Indiana Avenue, Chicago, U.S.A.
 L. F.F. †NETHERCLIFT, WILLIAM HENRY, F.R.C.S.Ed., Piccadilly Club, Piccadilly, w.
 L. F.F. NEUGEBAUER, FRANZ, M.D., *Directeur de l'Hôpital Evangelique*, Leszno, 33, Warsaw, Russia (Poland). V.P. 1887-9.
 1896 NEWNHAM, WILLIAM HARRY CHRISTOPHER, M.A., M.B.Camb., M.R.C.S., *Assistant Physician Accoucheur Bristol General Hospital*, Chandos Villa, Queen's Road, Clifton.
 F.F. *†NUTT, WILLIAM ANTHONY, L.S.A.Lond.
- 1894 †OAKELEY, CHARLES EDWARD, L.R.C.S., L.R.C.P.Edin., Lydart, Kitto Road, New Cross, S.E.
 1896 †O'BRYEN, JAMES WHEELER, M.D.Vermont, L.R.C.P. and S.Ed., Springfield Lodge, Sydenham, S.E.
 L. 1889 †O'CALLAGHAN, ROBERT, L.R.C.P., F.R.C.S.I., *late Surgeon Carlrow Infirmary and Senior Surgeon Chelsea Hospital for Women*, 137, Harley Street, w. C. 1891-3.
 1885 O'DONNELL, THOMAS J., L.K.Q.C.P.I., L.M., L.R.C.S.I., *Surgeon-Major Army*, Oorgaum, Mysore State, India.
 1894 †OLIVER, JAMES, M.D., M.R.C.P.Lond., F.R.S.Edin., *Physician to the Hospital for Women, Soho Square, W.*, 18, Gordon Square, w.c. C. 1896-7.
 1895 †OLIVER, FRANKLIN HEWITT, L.R.C.P.Lond., L.S.A., *District Surgeon Royal Maternity Charity of London, and District Medical Officer City of London Lying-in Hospital*, 2, Kingsland Road, N.E.
 1891 OLIVER, THOS., M.A., M.D., F.R.C.P., *Professor of Physiology, University of Durham, Physician Newcastle-on-Tyne Infirmary*, 7, Ellison Place, Newcastle-on-Tyne. C. 1892-4.
 1893 OSBURNE, CECIL A. P., F.R.C.S.Ed., L.R.C.P.Ed., The Oaks, Hythe, Kent.
 L. 1889 OSTROM, H. J., M.D., 42, West 48th Street, New York, U.S.A.
- F.F. †PADMAN, JOHN, M.R.C.S.Eng., 22, Bloomsbury Square, w.c.
 L. 1888 PARKINSON, J. TAYLOR, M.D., Brook View, Crystal Brook, South Australia.
 1897 PETCH, RICHARD, M.D.Lond., M.R.C.S., *Physician York County Hospital*, 72, Micklegate, York.
 1891 *PETTER, WALTER, M.B., C.M.Ed.
 1891 PHILIPSON, Professor G. H., M.A., M.D.Cantab., D.C.L., F.R.C.P., *Professor of Medicine University of Durham, Senior Physician Newcastle-on-Tyne Infirmary*, 7, Eldon Square, Newcastle-on-Tyne.

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 F.F. †PICKETT, JACOB, M.D. St.And., L.R.C.P.Edin., L.M., M.R.C.S.Eng.,
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- L. F.F. PINARD, ADOLPHE, M.D., *Professeur à la Faculté, Accoucheur de Lari-*
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- 1895 †PLOWMAN, T. A. BARRETT, M.R.C.S., L.R.C.P., Eagle House,
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- L. 1885 POLK, WILLIAM M., M.D., *Ex-President New York Obstetrical Society,*
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- 1886 †POPE, HARRY CAMPBELL, M.D.Lond., F.R.C.S., 280, Goldhawk
 Road, Shepherd's Bush, w. C. 1890-2.
- 1891 †POULTER, REGINALD, M.R.C.S., L.R.C.P., 28, Wimpole Street,
 Cavendish Square, w.
- 1888 †POWELL, HENRY FITZGERALD, M.D., F.R.C.S.Edin., 7, Connaught
 Street, Hyde Park, w. C. 1896-7.
- 1895 PRENDERGAST, J. M. VINCENT, M.D., R.U.I., M.A.O., M.R.C.P.
 Lond., 1, Rue d'Anjou, Faubourg St. Honoré, Paris.
- F.F. †PURCELL, FERDINAND ALBERT, M.D., M.Ch., R.U.I., M.R.C.S.,
 L.M.Eng., *Surgeon to the Cancer Hospital, Brompton*, 7, Man-
 chester Square, w. C. 1888-9, 1893-5.
- L. F.F. PUREFOY, RICHARD DANCER, M.D., T.C.D., F.R.C.S.I., *Obstetric*
Surgeon Adelaide Hospital, 20, Merrion Square, Dublin. C. 1884-6.
- 1895 †PUTSEY, WILLIAM H., M.D.Dur., M.R.C.S., *Fleet Surgeon (retired)*
R.N., Medical Registrar South London Hospital for Women, 50,
 Tyrwhitt Road, Brockley, s.e.
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- 1887 RAE, GEORGE A., L.R.C.P., L.R.C.S.Ed., 1, Outram Terrace, Stoke,
 Devonport.
- 1894 RAMSAY, FRANK WINSON, M.D., B.S.Durh., Jesmond Dene, Bourne-
 mouth.
- L. F.F. RASCH, ADOLPHUS A. F., M.D., M.R.C.P., *late Physician for Diseases*
of Women and Children to the German Hospital, London, Blumen-
 strasse, 5, Halle à Saale, Germany. C. 1891-3. V.P. 1895-6.
- F.F. RAWLINGS, JOHN ADAMS, M.R.C.P.Edin., M.R.C.S.Eng., *Physician*
to the Swansea Hospital, Preswylfa, Swansea. C. 1888-9.
- L. 1887 REED, CHARLES A. L., M.D., *Professor of Gynaecology and Abdominal*
Surgery at the Cincinnati College of Medicine and Surgery, and
Surgeon to the Cincinnati Free Surgical Hospital for Women,
 Cincinnati, Ohio.
- F.F. †REEVES, HENRY ALBERT, F.R.C.S.Edin., *Surgeon to the Hospital for*
Women, 7, Grosvenor Street, w. C. 1884-6. V.P. 1892-4.
- F.F. REID, W. LOUDON, M.D.Glas., F.F.P.S.Glas., *Professor of Midwifery*
and Diseases of Women and Children, Anderson's College, Glasgow,
Physician to Dispensary for Diseases of Women, Western Infirmary,
 7, Royal Crescent, Glasgow. C. 1888-9. V.P. 1896-7.
- F.F. †RICHARDSON, JOHN HUMPHREY HOWARD, M.R.C.S., L.S.A., 22,
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- 1887 RICHMOND, THOMAS, L.R.C.P.E., L.F.P.S.G., 2, West Garden Street,
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- L. 1888 RICKETTS, E. S., M.D., 93, East Fourth Street, Cincinnati, Ohio, U.S.A.
- F.F. †RILEY, JAMES, L.R.C.P.Edin., M.R.C.S.Eng., L.M., L.S.A., 111, St. George's Road, South Belgravia, s.w.
- L. F.F. ROBERTS, D. LLOYD, M.D., F.R.C.P., F.R.S.Edin., *Obstetric Physician to the Manchester Royal Infirmary, Physician to St. Mary's Hospital, Manchester, and Lecturer on Clinical Midwifery and the Diseases of Women in Owens College, 11, St. John Street, Manchester.* C. 1884. V.P. 1886-8.
- F.F. †ROBERTS, THOMAS, L.S.A.Lond., *District Surgeon Royal Maternity Charity, Falloiden House, 95, Tredegar Road, Bow, E.*
- L. F.F. †ROBERTSON, A. MILNE, M.D.Edin., Gonville House, Roehampton, s.w.
- 1895 ROBSON, ALFRED WILLIAM, L.R.C.P. and S.Ed., 111, Park Road, Aston, Birmingham.
- 1888 †ROBSON, ARTHUR W. MAYO, F.R.C.S.Eng., L.R.C.P.Lond., *Professor of Surgery Yorkshire College, Surgeon Leeds General Infirmary, 7, Park Square, Leeds.* Hon. Loc. Sec. C. 1893-5. V. P. 1896. Pres. 1897.
- F.F. ROOTS, WILLIAM HENRY, M.R.C.S.Eng., Canbury House, Kingston-on-Thames.
- L. 1885 ROSEBRUGH, JOHN WELLINGTON, M.D., Hamilton, Ont., Canada.
- L. 1888 ROSS, JAMES F. W., M.D., C.M., L.R.C.P.Lond., *Professor of Gynaecology and Abdominal Surgery Ontario Medical College for Women, Gynaecologist to Toronto General Hospital, St. Michael Hospital, and St. John's Hospital for Women, 481, Sherbourne Street, Toronto, Canada.* Hon. Loc. Sec.
- F.F. †ROUTH, CHARLES HENRY FELIX, M.D., M.R.C.P., *Consulting Physician to the Samaritan Free Hospital, 52, Montague Square, w.* V.P. 1884-6 and 1896-7. C. 1888 and 1892-4. Pres. 1890.
- L. F.F. RUSSELL, LOGAN D. H., M.D., M.R.C.S., Government Park, St. Catherine, Jamaica.
- 1895 †SAUNDERS, FREDERICK HERBERT, M.D., C.M.Aberd., 1, Redcliffe Gardens, South Kensington, s.w.
- F.F. †SAVAGE, THOMAS, M.D., M.R.C.P.Lond., F.R.C.S.Eng., *Professor of Gynaecology Mason's College, Surgeon Birmingham and Midland Hospital, 133, Edmund Street, Birmingham.* C. 1884-6, 1895-7. V.P. 1889. Pres. 1894.
- 1895 SAMBON, LUIGI, M.D., 41, Via Palestro, Rome, Italy. Hon. Loc. Sec.
- L. 1886 *SAWYER, EDWARD WARREN, M.D.
- 1892 †SCHACHT, F. F., M.D., B.A.Cantab., *late Physician to Out-Patients, Chelsea Hospital for Women, 168, Earls Court Road, s.w.* Hon. Sec. 1893-6. Editor 1896-7. V.P. 1897.
- 1839 †SCOTT, ALEXANDER THOMAS, M.R.C.S.Eng. and L.S.A., 8, Parkhurst Road, Camden Road, n.
- 1891 †SCOTT, JOHN, M.D., M.C., M.A.Aber., 249, Upper Brook Street, Manchester.

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- 1895 SCOTT, T. BODLEY, L.R.C.P.Lond., M.R.C.S., Poole Road, Bournemouth.
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- 1885 †SHAW-MACKENZIE, A. C., L.S.A., Danehurst, 3, Barclay Road, Fulham, s.w.
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C. 1896-7.
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- 1895 TREUB, HECTOR, M.D., *Professor of Obstetrics and Gynecology Uni-
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- L. 1889 TUOHY, JOHN FRANCIS, M.D., M.Ch., *Surgeon-Major I.M.S.*, Civil
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- L. 1887 UNDERWOOD, EDWARD F., M.D., Port Bombay, India.
- L. 1885 VAN DER VEER, ALBERT, M.D., 28, Eagle Street, Albany, New
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 Putney Hill, S.W. C. 1897.
 1894 *WYSARD, ALEXANDER THOMAS, M.R.C.S., L.R.C.P.Lond.

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 1891 YOUNG, MOFFAT, L.R.C.P., Victoria Road, West Hartlepool.

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MAY, 1896.

THE BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, FEBRUARY 13, 1896.

CLEMENT GODSON, M.D., PRESIDENT, IN THE CHAIR.

PRESENT : 35 Fellows and Visitors.

The following gentlemen were elected Fellows of the Society :—Thos. A. Appleton, M.R.C.S., L.S.A., Fulham ; Dundas M. Paget, L.R.C.P. & S.Ed., Godalming ; Henry Marcus Allen, F.R.C.P.Ed., M.R.C.S.Eng., Brighton.

The following gentlemen were proposed for election as Fellows of the Society :—Ralph Henry Brown, M.R.C.S., L.R.C.P., London ; Charles F. K. Murray, M.D.R.U.I., F.R.C.S.I., Kenilworth, Cape Town ; Angus Valence Macgregor, M.B., C.M.Ed., West Hartlepool ; Eldred Addison, M.R.C.S., L.R.C.P., London.

VOL. XII.—NO. 45

I

SPECIMENS.

- (1) CASE OF ADVANCED UTERINE CARCINOMA, TREATED BY CHLORIDE OF ZINC CAUSTIC: RECOVERY.
- (2) HÆMORRHAGIC CYST OF THE OVARY FILLING THE PELVIS, ACCOMPANIED BY ADENO-CARCINOMA OF THE UTERUS. PANHYSTERECTOMY, WITH REMOVAL OF THE CYST AND APPENDAGES: RECOVERY.

BY FRED. BOWREMAN JESSETT, F.R.C.S.

(1) CASE OF ADVANCED UTERINE CARCINOMA.

I am showing this specimen to-night for three reasons, firstly, sir, because the patient first came under your notice, being sent to you by Dr. Chambers. You kindly asked me to see her with you, as you were of opinion that the disease was rather too far advanced to allow of vaginal hysterectomy being undertaken; moreover, the patient's age and cardiac condition contra-indicated a prolonged operation or the shock of so severe a procedure as total extirpation; we decided, however, that the caustic treatment might be tried.

The patient was married, aged 74 years, highly nervous. On December 17, 1895, with your assistance and Dr. Chambers', I scraped out the diseased cavity with Volkman's spoon, and then applied my dredger, the result being that a smooth surface was formed, and when the bleeding had ceased, I plugged the cavity with small pieces of wool soaked in chloride of zinc paste, and packed the vagina with bicarbonate of soda tampons. The patient bore the operation very well. Afterwards she appeared to suffer more pain than I have usually witnessed in these cases. I attributed this to her neurotic condition to a great extent. On the tenth day I removed the slough representing the whole uterus and all seemed well, but two or three days after, fæces were seen coming through the vagina; this is the second reason I am showing this specimen, as it demonstrates how difficult it is in some cases to avoid this misfortune. The vagina was kept well douched out, and I saw the patient again on February 10, about ten weeks after

the operation, and was rejoiced to find that the recto-vaginal opening had closed, and the motions were passed naturally. I have noticed the same thing occur when the bladder had been opened, and a vesico-vaginal fistula formed, as the part cicatrised these fistulæ closed.

The third reason for bringing this specimen before you is that it has often been asked, Does the caustic action extend to the peritoneum? In this case there is no doubt about it, as both Douglas' pouch and the utero-vesical fold of peritoneum have been destroyed, and came away with the slough, this can be readily seen in the specimen sent round, yet there was not at any time any sign of peritonitis.

The patient is now far better in health than she has been for some time, and there is no appearance at present of any disease.

P.S.—I saw this patient again in April, and she was then free from any sign of recurrence, and enjoying good health.

(2) HÆMORRHAGIC CYST OF OVARY, WITH ADENOCARCINOMA OF UTERUS.

For these notes I am indebted to my house surgeon, Mr. White.

A. C., age 43, married, housewife, was admitted under Mr. Jessett at the Cancer Hospital on December 21, 1895, complaining of bleeding from the vagina. The patient, a pale, fairly well-developed woman, had always had good bodily health, and had no previous serious illness. There was nothing in the family history of any importance.

She had had six pregnancies and three children, the last three pregnancies having ended in miscarriages. The last miscarriage was from three to four years ago, but the exact date was uncertain; the last child was born ten years ago.

History of Present Condition.—Up to two years ago, patient had always been quite regular and natural, but since this time there has been almost continuous bloody discharge from vagina. Has not missed any periods about this time,

nor was there any increase in the amount of blood lost at the previous periods. During the earlier part of the time there was some intermittent abdominal pain, but she has lately had none.

Present Condition.—Patient is anæmic, with pallid lips and pearly conjunctivæ; has a good appetite. Bowels confined. By abdominal palpation there is found a round hard fixed swelling occupying the left iliac and hypochondriac regions. The limits of the swelling cannot be determined with any degree of accuracy owing to the rigidity of the abdominal parietes.

Per vaginam, the cervix is found to be high up and pointing forwards, but normal in appearance and hardness, except in posterior lip, which is very hard; the os is patulous, and admits the finger tip. There is a large hard firm swelling, about the size of a cricket ball, filling Douglas' pouch and projecting into the posterior fornix. This swelling is continuous with the swelling felt per abdomen. The whole mass is now felt to be slightly mobile. The fundus uteri cannot be distinguished from the rest of the swelling. There was blood on the examining finger, and the sound was not used.

On December 31, 1895, patient was examined under an anæsthetic. The fundus uteri was then found to be in front of the mass, the os being high up behind the pubes. The mass was found to be fairly mobile, the mass in Douglas' pouch feeling like a cyst or soft fibroid. There was a swelling in each iliac region; that on the left side being the larger, the other being rounded and mobile, feeling like a large ovary. The larger mass on the left side was continuous with the mass felt in Douglas' pouch. The sound passed four inches. It was then decided to perform an exploratory abdominal section, with a view to panhysterectomy if it proved to be a fibroid tumour, as it was then thought to be.

On January 7, patient having been prepared by frequent vaginal irrigations of 1-3000 perchloride, followed by inser-

tion in the vagina of a cotton wool tampon soaked in 1-5000 perchloride, gas and ether were administered and laparotomy was performed. It was then found that the mass on the left side was a cyst occupying the position of the left broad ligament and ovary, filling up Douglas' pouch, the ligament and tube being visible above the cyst, folded on themselves. There was a cystic swelling the size of an egg in the position of the right ovary, this being also displaced backwards towards the pouch of Douglas, and adherent to the other cyst. The larger cyst on the left was extensively adherent to the structures around it and to the rectum. The uterus much enlarged, feeling soft and without evidence of any myoma.

Mr. Jessett then proceeded to separate the larger cystic mass from its adhesions, which were almost universal. Whilst this was being done the cyst burst, and a quantity of very dark clotted blood escaped into the abdominal cavity. The foot of the table had previously been raised on blocks to approximate the position of the patient to the Trendelenberg position. The broad ligaments were ligatured on each side, and both cysts being free, it now remained to deal with the uterus. A bladder sound was passed, and the position of the bladder made out. Mr. Jessett's bivalve speculum was now passed, with the anterior blade only pushed to within an inch and a-half of its full extent, so as to allow the long posterior blade to project into the posterior fornix, owing to the position of the os uteri, tucked away behind the pubes. The speculum being introduced, the upper ends of the blades were widely separated. Anterior and posterior flaps were now cut on the uterus, and the vaginal anterior and posterior fornices opened on the upper ends of the speculum. The uterine arteries being ligatured, the uterus was now removed. The peritoneal cavity was now irrigated with weak boracic acid solution, the fluid passing out through the speculum. The ends of the pedicle ligatures were left long and passed into vagina through the speculum. The peritoneum being freed

from clots, and all bleeding having ceased, silk loops were passed through the uterine flaps and caught in the spring catch. By drawing on this the flaps were now inverted into the vagina. A glass drainage tube was passed into the vagina and gauze packed round it. A thin strip of gauze was put into the tube and the abdominal wound closed in the usual way. Patient bore the operation well, and there was but little shock.

On the next morning, January 8, the outer dressings were removed, the gauze vaginal packing being left in, the gauze in the drainage tube was removed, and a small quantity of blood-stained serum withdrawn from it with a syringe. Temperature normal. A little pain from time to time due to flatus. There was a good deal of clotted blood on the dressings, which had escaped through the tube. The dressing was again renewed in the evening, and again a little serum drawn from tube.

On January 9, patient much better ; had had a little pain in the night, but had slept well after a hypodermic injection of morphia. The loops through the flaps were now removed and also the vaginal packing, and the vagina syringed out with iodine water. There was very little discharge. No pain.

On the 10th, still improving ; hardly any discharge. Temperature normal. Bowels open.

From this time patient made an uninterrupted recovery. The wound was dressed daily, and the vagina syringed and lightly packed with iodoform gauze. The ligatures on the pedicles did not come away till twelve days after. The abdominal sutures were removed by the fourteenth day. For the last week patient has been getting up daily.

The specimen consists of the uterus and appendages. The uterus is enlarged, the walls being much thickened and the cavity elongated, the walls at their thickest part being about one inch thick. The length of the organ is five inches, and its width three inches. Its consistence is firm all over, though softer than normal, and on section it is

somewhat pale. Occupying a position behind the left broad ligament, which is thickened and pushed upwards, is a cyst with thick walls and a ragged interior surface—about the size of a cricket ball; the ovary has almost disappeared, and its place is taken by this cyst. At the time of the operation it was filled with blood clot, but this escaped during operative manipulation by the ragged hole seen at the upper part of the cyst. Over the cyst is spread the Fallopian tube, or rather its outer extremity, the fimbriæ having disappeared, and the outer one-third of the tube being continuous with the cyst wall. The lower and posterior part of the cyst is adherent to the uterus by firm bands. At the anterior and inner part of the cyst is a rounded, distinct portion, with thicker walls, projecting forwards; its cavity is, however, continuous with the main cavity of the cyst. If, however, its outer surface be examined carefully, it is seen that this portion is clearly separated from the rest of the cyst. This is clearly seen posteriorly, where there is a distinct groove between the main cyst and this special portion. Moreover, on examining the posterior surface of this portion, the ovarian ligament is seen to be inserted into this special part, which is quite smooth, and is here covered over by the adhesion to the uterus. If, again, the front of this part be examined, it will be seen that it is posterior to the broad ligament, which is pushed upwards and covers this part of the tumour. This part of the tumour apparently represents the remains of the left ovary. The right ovary is in a precisely similar condition, though it is not so marked. The ovary is enlarged, and there is posterior to it, and continuous with it, a cyst about the size of a walnut, containing clotted blood similar to that on the other side. The broad ligament is not much affected and the tube is free, except at its outer end, where the fimbriæ have become thickened, and have become attached to the cystic ovary. A section from the uterus presents the characteristics of malignant adenoma, the tissue being infiltrated by atypical gland formation on the model of the uterine gland. The wall of the cyst is composed of

fibrous tissue, with irregular bands of unstriped muscle arranged without any order, so that the section shows these bands cut obliquely in all ways, longitudinally and transversely. The interior is lined with epithelium, which is arranged on papillary processes. The sections show no sign of malignant growth, being apparently formed of disorganised ovarian stroma tissue.

During life the relative positions of the various parts of the specimen were as follows : The uterus was in front, and the two cysts occupied a position to the side of, and mainly behind, the uterus. The posterior surface of the small cyst of the right ovary was firmly adherent to the part of the left cyst, which is now a torn and ragged opening, the two tubes being thus bent on themselves.

The PRESIDENT said the first specimen was of special interest to him, and he was very gratified to see the uterus at the meeting, instead of inside the patient, as it was when he last saw it. The patient was the mother of a medical man, and the wife of a chemist, and was very anxious to have her life prolonged. She at first consulted Dr. Chambers, a Fellow of the Society, who diagnosed malignant disease. She was greatly distressed, and came to him (the President) asking if nothing could be done. She was the subject of heart disease ; nevertheless, he held out to her the hope that the malignant disease could be removed. The operation he had in view was the one actually done. The portio vaginalis showed no sign of disease, but there were conclusive signs of disease higher up, and examination caused much hæmorrhage. In former years, such a case would probably have had to be allowed to go without relief. It was too soon to speak of the permanent results in this case ; and he hoped, as he said in his introductory address, that Mr. Jessett would bring before the Society the after-effects of the treatment in this and other cases ; but whatever the later result, the patient was in the meantime greatly relieved, and had the hope that the disease was cured ; and this was a great deal.

Dr. PURCELL congratulated the President and Mr. Jessett on the result of the treatment in the first case. This was one of a series of similar operations which they had now done at the Cancer Hospital. The present specimen was of about the usual size which was found. He was still in doubt as to the presence of peritoneum on the specimen. The principal accident to be feared was sloughing into the rectum ; the tendency to this was increased if the application of bicarbonate of soda was insufficient to neutralise the chloride of zinc. He did not know if Mr. Jessett had in this instance used the gutta-percha cap which they had lately adopted at the hospital.

In the second case, the mass which presented itself at the time of operation warranted, and indeed, demanded, panhysterectomy, though it looked at first very formidable, and the structures were much disorganised. He congratulated Mr. Jessett on the result of it.

Dr. HEYWOOD SMITH thought the technique of the first operation was most important. He would ask whether the chloride of zinc wool was used too wet. It should be only just damp, as recommended originally by Sims. He thought the bicarbonate of soda should be applied next to the chloride of zinc wool, without the intervention of gutta-percha.

Mr. JESSETT, in reply, said that he used a gutta-percha cap in this, as in other cases, as well as packing in, next to the chloride of zinc wool, a piece of dry cotton-wool, which absorbed excess of the caustic sufficiently to act upon the lower part of the uterus. As an additional precaution he had lately adopted a further procedure, viz., packing the vaginal walls round with lint covered with iodoform ointment. He would point out that this specimen distinctly showed the presence of peritoneum, both anteriorly and posteriorly. He had found that if the wool was used too dry the results were inadequate, as it could not be got strong enough. He used the paste in pellets, which he packed in one at a time into the uterine cavity ; and by this means the caustic was applied as dry as possible.


(1) SPECIMEN AND NOTES FROM A CASE OF SUPRA-VAGINAL HYSTERECTOMY, DURING PREGNANCY, FOR THREATENED INTESTINAL OBSTRUCTION.

(2) A LARGE FIBROID, INCREASING RAPIDLY AFTER MARRIAGE.

BY GEORGE ELDER, M.D., Surgeon to the Samaritan Hospital for Women, Nottingham.

The patient from whom the specimen was taken which I exhibit this evening, is aged 37, and was married three years ago. She comes of a very hardy stock, and had herself always had exceedingly good health prior to marriage and since, barring increasing difficulty in having her bowels relieved, until a few weeks before consulting me. Although menstruation had always been very free, it was regular, and remained so until between three and four months of her illness, when it ceased; marriage had not affected the amount nor the regularity of the flow, and up to her illness she had not the faintest suspicion of being affected with pelvic mischief. As above mentioned, constipation had been suffered from for a long time past, but this had become very much worse during the past five or six months, and during the latter five or six weeks of this period, relief could only be had by the use of increasingly large doses of aperients. In addition to this symptom, frequently recurring attacks of sickness had troubled the patient since her marriage. The cessation of the menses for four months, coupled with enlargement of the breasts, made the patient suspect herself to be pregnant. The illness, which culminated in the operation shortly to be described, began suddenly on December 12 last with violent sickness, which went on almost continuously day and night for three days, and for four days thereafter it was excited by any attempt to take food. The vomit was bilious in character, and although towards the latter part it is described by the patient as being "thick, dirty-looking stuff," it does not seem to have been feculent.

Repeated enemata failed to relieve the bowels until the





Photograph of Dr. Elder's specimen of myomatous pregnant uterus and foetus,
removed by supra-vaginal hysterectomy.

seventh day, when a small motion was passed, and from this time onwards until January 1, when she saw me, despite the use of the same means assisted by aperients, there had only been two stools, these being on December 31 and the morning of January 1 respectively. During her illness she had become very sallow, and lost considerably in flesh, and it was felt by her medical attendant, Dr. Rafferty, of Waltham—who throughout had recognised the gravity of her condition—that an operation offered the patient the best chance of recovery. On examining her abdomen there could be seen and felt a somewhat prominent tumour rising up from the pelvis to within an inch of the umbilicus, consisting of a major central portion, of which the upper part felt like the pregnant uterus. Two offshoots could very distinctly be felt running up from the uterine mass; the left and larger was very irregular in shape, whilst that on the right seemed to have a closer connection with the parent tumour, and consisted of two or three somewhat large nodules.

Per vaginam, the os could be felt with difficulty, as it was pressed to the left by a large, solid, evidently fibroid growth, which completely blocked up the pelvic outlet.


On January 4, supra-vaginal hysterectomy was performed in the following manner. First of all both broad ligaments were tied off so as to minimise the risk of tension, then the uterine appendages were removed, and now on lifting up the growth preparatory to its removal, a coil of small bowel, from three to four inches long, was found firmly attached to its upper surface. Fortunately, without interfering with the integrity of the bowel, the adhesions were freed and ligated. A provisional elastic ligature being passed round the uterine neck, a circular incision through the peritoneal investment was made a few inches above, and the whole mass shelled out. Nothing now was left but part of the cervix, and when the uterine arteries were secured, the elastic ligature was removed, and bleeding points controlled by ligature or pressure from the several layers of

sutures which were put in to bring together the raw edges of the stump. This having been fixed at the lowest angle of the wound, the abdominal parietes were brought together in the usual manner, provision being made for drainage by a glass tube passed down to Douglas' pouch. The patient bore the operation well, but some eight hours afterwards—probably as the result of sickness—the surface of the stump bled freely, to check which it had to be somewhat opened up, and its surface desiccated by the solid perchloride of iron, and pressure applied. Although this incident has somewhat prolonged the convalescence of the patient, in other respects recovery has been uneventful, and she is returning home this week with her wound perfectly healed.

The patient had the first week considerably more pain than is usually found accompanying this treatment of the stump, and it was not until the fifth day that the fluid drained off became clear and allowed of the removal of the glass tube. As will be seen from the charts which I hand round, the temperature only once ran above 100°, viz., on the evening of the eighth day, and the pulse, except on the first, second, third, fourth, fifth, sixth and seventh days, never went above 100.

Description of the tumour.—The specimen, as will be seen, consists of the uterus cut through the cervix and containing a foetus eight inches in length, together with the amniotic fluid. In the region of the left broad ligament there is a series of pediculated myomatous nodules of irregular shape, in all about the size of a foetal head at term. Anterior and posterior to this there are two separate nodules of the size of a guinea-fowl and hen's egg respectively. Occupying the uterine wall on the right side there is a more flattened myomatous mass, and at the fundus and behind the cervix there are also other nodules. (The whole tumour has shrunk very much since its removal six weeks ago, more especially the uterine cavity; although the foetus was not removed until after the finish of the operation.)

Comments.—Although there are many points of interest



in this case, the one to which I wish to specially invite your attention is the evident connection which marriage bore to the perilous illness of the patient. Some eighteen years of menstrual life had been passed without the patient even suspecting herself to be suffering from any uterine trouble. Almost a parallel condition of matters was experienced in the case of the Porro operation which I described at this Society last November, where the woman, up till the moment of labour, believed herself to be absolutely healthy.

The PRESIDENT thanked Dr. Elder for the interesting specimens he had shown. One point struck him in connection with the first case, namely, whether the symptoms were of such a nature as to require interference at the time, or whether the patient might not have been allowed to go on to a later term of pregnancy, a Porro's operation being then performed. For though there had been obstruction, this had been relieved the day before operation. He congratulated Dr. Elder on the success of the case.

Dr. BANTOCK joined the President in congratulating Dr. Elder. He thought it was a very serious step to question the judgment of a man who had a case like this to deal with ; for he only had the knowledge of the case necessary to guide him to a correct decision, and on him also rested the responsibility of such decision. They must be prepared in such cases to judge by results. For his own part, he upheld Dr. Elder's action in every particular. The specimen illustrated very well the arguments which he had repeatedly urged there and elsewhere against the treatment of the stump by the intra-peritoneal method. In fact, this method was now no longer practised by any operator of repute ; it was largely replaced by the method of total extirpation which was practically a form of extra-peritoneal procedure. He had adhered to the extra-peritoneal method because the difficulties in controlling hæmorrhage were so great in the intra-peritoneal operation, and its results were so bad. At the time when hæmorrhage is most likely to occur, it does as a matter of fact take place from the stump, however well

controlled at the time of operation. His experience of total extirpation of the uterus led him to regard the operation with favour ; nevertheless, he contended that when it was possible to leave the floor of the pelvis intact, this should be done, by leaving a part of the cervix ; he admitted that this was not always possible, and that then total extirpation should be performed. A short time ago, while in Paris, he saw a distinguished operator remove a pyosalpinx by the vagina, the uterus being removed at the same time. The result, it was true, was good ; but still he thought it would have been better in that case to operate by the abdomen, and leave the vaginal roof intact.

Dr. PURCELL said he did not gather whether Dr. Elder used a Kœberlé's serre-nœud for the stump ; if so, could the hæmorrhage not have been controlled by tightening it ? He was glad to hear that Dr. Bantock had come round to the view that total extirpation was an extra-peritoneal procedure.

Dr. BANTOCK observed that he had always held this view.

Mr. BOWREMAN JESSETT congratulated Dr. Elder on the success of his case. Statistics showed that under such circumstances removal of the uterus and tumour was the correct treatment. He had previously reported a case where he had advised delay in operating on such a case ; but a month later the patient had got so much worse that her life was in serious danger, and he had then to operate. The only point on which he joined issue with Dr. Elder was that it seemed to him that it would have been better to remove the whole cervix, in which case there would have been little or no hæmorrhage afterwards. If the cervix were left and the peritoneum laced over it, then if hæmorrhage occurred, a hæmatocele was likely to form between the peritoneum and the stump, and to require interference from the vagina ; hence he thought it better to remove the whole uterus and evert the flaps into the vagina. He urged that in this procedure the vaginal roof was in no way weakened ;

he had seen many such cases later, and the vaginal roof was quite firm. Moreover the possible weakening was not to be compared with the weakening of the abdominal parietes by the extra-peritoneal application of the serre-nœud ; and further, by the latter method convalescence was much delayed, and there was a risk of a fistulous tract, or of abdominal hernia. He thought the use of the elastic ligature might have had something to do with the hæmorrhage, to which there was then a special tendency when reaction set in. He did not contend that all cases could be dealt with by panhysterectomy ; but he thought it was applicable to the majority of them.

Dr. ELDER, in reply, expressed his obligations to the Fellows for the kind way in which they had referred to his case. In answer to the President's question, he might mention that the foetus was dead ; but even had it been otherwise, the patient's condition was so critical as to place her interests paramount ; and further, the nearest doctor lived seven miles away, so that the risk of waiting would have been very grave. His only regret in the case was that he did not remove the cervix as well as the body of the uterus ; the patient would then have been saved both pain and the risk of hæmorrhage. In reply to Dr. Purcell, he did not use the serre-nœud, but brought the peritoneal edges round the stump.

THE PERMANENT CURE OF ANTEFLEXION BY OPERATION.

BY GEORGE E. KEITH, M.B., C.M.

Without entering into the question of dysmenorrhœa in all its phases, I would draw attention to the variety known as obstructive dysmenorrhœa. It seems strange to me, and probably also to others, that there can be a doubt whether there is such a thing as obstructive dysmenorrhœa or not. Opinions on this question are, however, divided.

Those who believe in the obstructive theory consider that the pain is frequently due to an alteration in the shape

of the uterus, or in other words, to an ante flexion of that organ. This flexion occurs either at the junction of the body and cervix or in the cervix itself, and may vary very much in degree. The fundus of the uterus appears always to be directed more towards the pubes than is natural, and the os looks more or less forwards; in a very well marked case the position of the os will show that, if the cervical canal were prolonged forwards, it would be parallel to the cavity of the body of the uterus.

For example, when an examination is made in an extreme case, the finger strikes against the os, which is looking forwards and upwards; the shape of the cervix is not what is usual, the distance between the os and the vaginal junction in front being much shorter than that from the os to the vaginal junction behind. Pushing the finger up in front the body is felt through the anterior fornix. It is thus evident, and it is shown on bi-manual examination, that the uterine canal cannot possibly be in a straight, or even an approximately straight, line.

It is unnecessary to trouble you with the symptoms which may be caused by an ante flexion, but it is necessary to remember that those tend to become more severe owing to alterations in the lining membrane of the body of the uterus and in the pelvic circulation generally. This must be borne in mind, because the full benefit of the operation to be described does not always appear immediately. The old operation of splitting the cervix has been perfected by Dr. Dudley, of Chicago. His modification does not seem to have met with the attention it deserves, and it is one of great importance, because it does away with the healing by granulation and its accompanying evils. I believe that the object to be aimed at is not the removal of any real or supposititious lessening of the lumen of the uterine canal, but in the rendering of this canal straight, or at least, in doing away with any marked bend, and in this way relieving the pelvic circulation.

The old operation of dividing the cervix either laterally

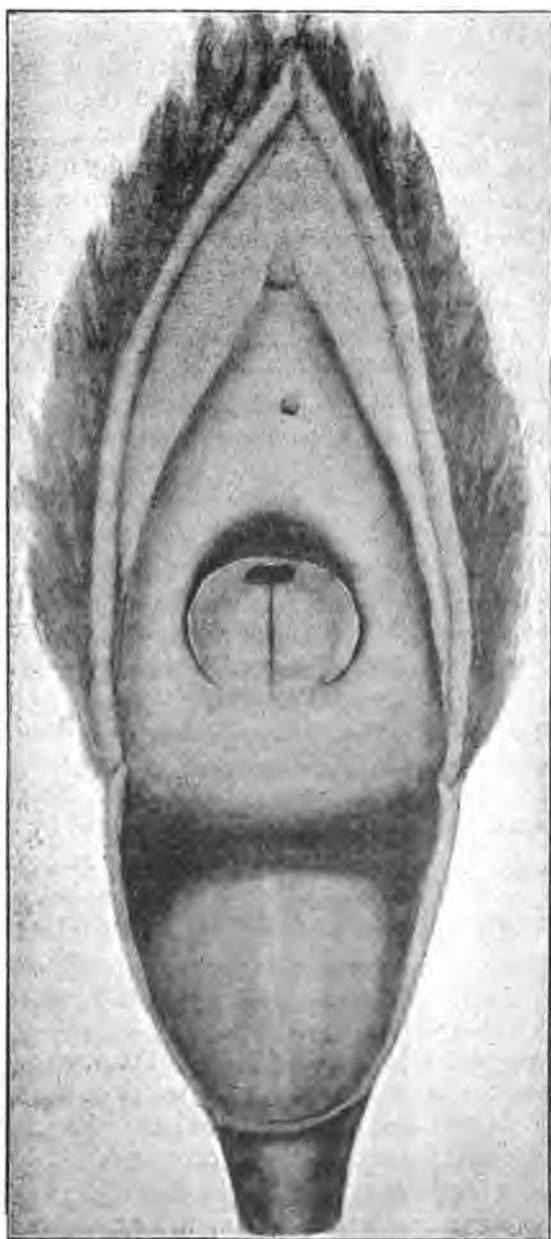


FIG. 1.

or through the posterior lip has this great fault, that, unless artificial means be taken to keep the canal dilated, the cut surfaces adhere almost immediately and the malformation is exactly as before. If the canal is rendered permanently enlarged by artificial means, a slight deformity may be cured, but a marked one will not be relieved, as a rule, because the uterine canal has not been made straight or at least sufficiently straight to allow of the easy exit of the menstrual fluid. In addition, more or less cicatricial tissue will be formed. The aim of the operation ought to be to make the canal of the body of the uterus and the cervix into a straight line in such a way that there can be no return of the deformity.

The following are the steps of the operation :—It is essential to use Sims' speculum, and as this operation may have to be performed on unmarried women the smaller end of the smallest sized speculum, three-quarters of an inch in width, must be the one selected in such cases. It is thus unnecessary to rupture the hymen unless it be very small. The vagina is to be washed out, a tenaculum is to be fixed into the centre of the anterior lip of the cervix, and the uterus is drawn slightly downwards to straighten the bend as far as possible. A sound is passed to determine the exact direction of the canal, which is then thoroughly dilated, preferably with a Goodell's dilator. This is followed by curetting, a large quantity of fungosities being usually removed. The operator then takes the tenaculum in the left hand and with knee-bent scissors in the right cuts through the whole thickness of the posterior lip of the cervix almost to the vaginal mucous membrane (see diagram). For convenience I propose to call the end of the cervix at the os the point, and the part where it meets the vagina the base. There are now two cut surfaces, the upper or right, and the lower or left, and each requires to be sutured separately. It will be seen that if the cut surface on one side is doubled on itself so that the point touches the base, and the same is done on the other side, the point, *i.e.*, the os, must be either

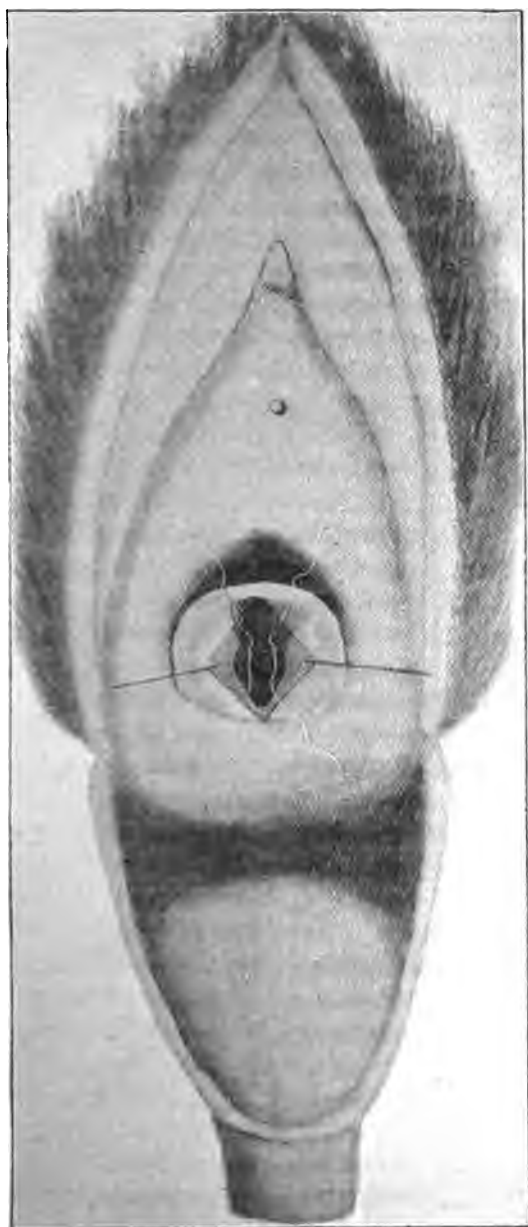


FIG. 2.

drawn backwards or the base must be drawn forwards. What happens is that the point is drawn backwards. It is next fixed in this position by sutures. The stitches are put in in the following way :—the needle is passed through the whole thickness of the point on one side and from the vaginal surface to the cervical, and in the reverse direction through the whole thickness of the base (see diagram). The stitch is then tied, thus keeping the cut surface doubled on itself. A similar stitch is then put into the lower side, one stitch on each side being usually sufficient. In this way the incision, which was originally longitudinal, has become transverse, although in two halves. It will be now noticed that the anterior lip has become elongated, and on bi-manual examination the body of the uterus and the newly-formed os will be found in a straight or almost straight line.

The after-treatment consists in simply keeping the patient in bed for ten days.

Case I.—For Dysmenorrhœa and Sterility. The patient, aged 29, married for eight years, had never menstruated without pain. This pain commenced a few hours before the flow, and lasted usually for twenty-four hours, during which time she had always to keep her bed. The general health was not very good, but what was most distressing to the patient was that she was absolutely sterile. Before I saw her she had undergone a large amount of local treatment without benefit. On examination, the cervix was found to be bent at a right angle to the body, which was somewhat anteverted. After the operation already described had been performed, the patient menstruated without pain, soon became pregnant, and was delivered at full time.

*Case II.—*Miss C., aged 32, suffered from dysmenorrhœa and menorrhagia, which had so affected her general health that she had to give up her situation of a governess. The pain lasted for two days, commencing a few hours before the flow, and although it had been always present at these times it was decidedly becoming worse. The menorrhagia was of more recent date, and the quantity of blood lost was said to

be four times as much as it had previously been. The usual remedies had apparently all been tried, and as it was essential to the patient that time should not be lost, an examination was made at once under an anæsthetic. The cervix was found to be long and antelexed, but not to such a great degree as in the previous case. A similar operation was performed in the summer of 1893. There was little improvement experienced at the first two periods, during the third and fourth there was decidedly less pain and hæmorrhage, the fifth was almost natural in almost every respect, and since then there has been no trouble and the patient is now in perfect health.

Case III.—The patient, aged 27, had been married four years, and had never been pregnant. She had suffered from dysmenorrhœa since the first period, the pain coming with the flow. On several occasions the canal had been dilated. A year after the operation the patient was still sterile, but this may be accounted for by the fact that none of her husband's four married brothers have had any family. The dysmenorrhœa has been entirely relieved. This case was operated on by Mr. Skene Keith.

Case IV.—Miss B., aged 27, first menstruated at the age of 11½ years, and always had pain since she could remember, with excessive flow which lasted a full week. When 17 she suffered from gastric ulcer, and since then the periods have been accompanied by intense headache and sickness, coming on two or three days before the flow. There was dysuria and frequency of micturition, and the patient had to make water as often as thirty times in the twenty-four hours; all these symptoms being worse during the flow. Examination showing a very acute bend. Operation on October 20. During the night following the operation the patient made water only twice. I had a letter from her doctor last week in which he says:—"Miss B. is very much better, there is now no sickness nor pain with the periods, only a slight headache, the flow is normal and lasts three days, and the patient does not require to get up during

the night to pass water. There have been three periods since you operated."

The PRESIDENT thanked Dr. Keith for his interesting paper. The treatment of antelexion had so far proved so unsatisfactory that former methods, such as the intra-uterine stem, Dr. Wynn Williams' pessary, and Graily Hewitt's cradle pessary, had been almost entirely abandoned; and Dr. Keith's results appeared to be so good, and the method so free from risk, that they might hope that it would prove a valuable means of dealing with this difficult question.

Mr. SKENE KEITH thought it was very difficult for any one who had not seen the operation to understand it properly from a description. When his brother first described it to him he thought it impracticable; but after he had once seen it, it commended itself so much that he had himself performed it about twenty times since, and he had been very well satisfied with it. It gave good results in cases that must otherwise continue unrelieved. It was true that the relief afforded was not complete in every case, but he thought that in four out of five cases the cure was complete, and in the remainder the method was perhaps responsible for the fact that the relief was only partial. He had consequently slightly modified the procedure by making the division rather more complete and paring off the corners left after division so as to allow the uterus to assume a still straighter position. He thought the operation was really an advance in their knowledge of the treatment of antelexion causing dysmenorrhœa.

Dr. HEYWOOD SMITH said that hitherto they had been inclined to think that obstruction was due to a kink, which might be at the internal os. In Dr. Keith's operation, however, only the lower segment of the uterus was opened up, suggesting that the pain was probably due to the pressure against the posterior surface of the uterus itself exerted by the uterus when expelling its contents. The first step of the operation was like that adopted by Sims. He thought that, as a rule, mere dilatation performed once was useless, be-

cause of the tendency to return of the stenosis ; but if some kind of incision were used, combined with dilatation, good results were more likely to follow. He could see no objection to the introduction for a few days of an intra-uterine glass stem, and he had known this to answer well in the cure of both sterility and dysmenorrhœa.

Dr. BANTOCK observed that the history of the treatment of these cases was curious. Sir James Simpson got much credit for success by his method of bilateral division of the cervix ; the plan was, however, not without risk. He had himself done this in a few cases, but not for many years. In deciding on the kind of treatment necessary, one should consider first what kind of flexion one had to deal with. Dr. Keith was right in describing two kinds, the one at the internal os, and the other lower in the cervix. In the former variety treatment was most difficult. The natural history of these cases was as follows—when the patient first began to menstruate she had no pain. Later she began to suffer from dysmenorrhœa, and the pain gradually got worse, often reaching its maximum at about the age of 22, and being always worst during the first few days of the flow. The flexion at first caused some obstruction to the discharge of blood ; repetition of this obstruction led first to stasis in the uterine veins and then to hyperplasia, which might cause such narrowing of the canal that at last it would not admit a surgical probe. As long as there was no congestion, and the canal remained patent, there was no dysmenorrhœa. He thought that often dilatation was of the greatest service. He remembered the case of a married woman who was sterile, and in whom he could not pass a probe except under chloroform. He dilated to No. 16, and at her next period she was quite free from pain. She went home, menstruated once, and then became pregnant.

After treatment by bilateral division of the cervix, came Sims' method of division of the posterior lip, with division of the stricture at the internal os by means of the uterotome ; but this also was not free from danger. Considering the

good results obtained from dilatation, he was not prepared to advocate Sims' method ; for in cases of constriction at the internal os it did no good, and he thought experience would show its inferiority to dilatation.

Dr. HEYWOOD SMITH said that his expression that dilatation was useless, was perhaps a little too strong ; what he meant was that dilatation might have to be repeated from time to time till pregnancy occurred.

The PRESIDENT said that his experience of the operation of dilatation for dysmenorrhœa had been remarkable, and he hoped at some time to be able to record his results. What had struck him was that there were two kinds of ante flexion ; the first in which the cervix was in the proper position and the fundus bent forward ; the second in which the cervix itself was at fault, the fundus being in the proper position. He thought the results of Dr. Keith's operation would be found to be the least satisfactory in the latter class. He had found that dilatation up to No. 16 gave the best results.

Dr. GEORGE KEITH in reply, stated that he did not wish to claim the merit of the operation, which belonged to Dr. Dudley of Chicago. He did not think, when he first heard of it from Dr. Dudley himself, that it would do any good ; but after seeing the operation itself and its results, he changed his mind. The situation of the pain made no difference. He would like to ask Dr. Bantock a question : he could see that when dilatation was followed by pregnancy good must result ; but what about the case of virgins ? Did Dr. Bantock go on dilating ?

Dr. BANTOCK replied that in such a case the dilatation must be persevered in till the patient was cured.

Dr. KEITH continued that by the method he advocated the patient could be cured once for all, and the advantage of this in the case of virgins was obvious. It relieved the pelvic circulation and left the uterus straight.

NOTES OF GYNÆCOLOGICAL CASES FROM A PROVINCIAL HOSPITAL. By E. F. ELIOT, F.F.P. & S. Glasgow, Surgeon to the Women's Hospital, Southampton.

This paper was practically a short *résumé* of the surgical work done at the Women's Hospital at Southampton since its foundation, with detailed notes of the cases of greater interest and importance.

After dealing with the difficulties which one constantly meets, and which one has to overcome in this branch of practice, Mr. Eliot briefly detailed his methods of putting the matter before patients, and then proceeded to read notes of the more interesting cases. The chief of these were :—

(1) Tubercular disease of the omentum and general tubercular peritonitis simulating a parovarian cyst. The history pointed rather to cystic sarcoma, probably of an ovarian nature. The woman was aged 25, married, and history of trouble only dates back six weeks. Most of the omentum was removed, but the gut sloughed on the fourth day, a fæcal fistula resulting. The patient gradually sank thirty-three days after operation.

(2) Myoma uteri, of moderate size, associated with extensive malignant disease of the omentum and pelvic organs generally. Hysterectomy performed, with removal of most of the malignant mass into which hæmorrhage had recently occurred. The association of the two diseases is of interest. Patient rallied well, and had no subsequent pain. The growth recurred rapidly, and patient sank seven weeks later.

(3) Double hydrosalpinx, the tubes being distended with clear fluid to about the size of a large lead pencil. Recovery. Cure.

(4) Sarcoma of ovary, the true nature of which was not found till after the organ, which appeared little diseased, had been examined microscopically. The chief complaint was intolerable pain, for which medical treatment had given no relief. The case did excellently.

(5) Double pyosalpinx, with a bilocular ovarian cyst on

right side, one locule containing pus, the other serum. There was nothing to point to the cyst being a dermoid. There was extensive old and recent pelvic peritonitis, and the adhesions were very firm. The chief symptoms had been attacks of pelvic pain, gradually increasing in frequency. Recovery. Cure.

(6) Very long-standing chronic salpingitis, with small myoma of anterior wall of uterus. Removal of appendages, which were of almost cartilaginous hardness, and the size of an average thumb. Recovery. Cure.

(7) Large myoma uteri, with excessive hæmorrhage. The woman was blanched, and in a very critical state. Special precautions were taken against hæmorrhage when hysterectomy was performed. Recovery prolonged but eminently satisfactory.

(8) Very large double pyosalpinx with old peritonitis. Unbearable dysmenorrhœa was the reason for seeking advice. History of gonorrhœa. Removal of tumours, one the size of an average closed fist. Excellent result.

(9) Chronic cystic degeneration of both ovaries. Patient was a thin, spare little woman, complaining of rapidly increasing weakness and pain. Both ovaries were riddled with cysts, varying in size from that of a swan shot to that of a small marble. Since operation she is free from pain, gaining weight and well able to do her work.

(10) Double pyosalpinx. Patient age 20, single. No history of any definite trouble; came first for "whites." The discharge was bright yellow, with dysuria. The hymen was ruptured. Large double pyosalpinx removed. Climacteric symptoms very marked for some time. Is now quite well.

The PRESIDENT, in thanking Dr. Eliot for his interesting paper, regretted that time did not allow a discussion upon it. He congratulated Dr. Eliot on his work, and thought he had proved his contention as to the advantage to patients which was to be derived from the establishment of special hospitals in provincial towns.

THE BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, MARCH 12, 1896.

CLEMENT GODSON, M.D., PRESIDENT, IN THE CHAIR.

PRESENT : 26 Fellows and Visitors.

The following gentlemen were elected Fellows of the Society :—Angus Valence Macgregor, M.B., C.M.Ed., West Hartlepool ; Eldred A. Addison, M.R.C.S., L.R.C.P., Belsize Park, N.W. ; Ralph Henry Brown, M.R.C.S., L.R.C.P., Curzon Street, W. ; Charles F. K. Murray, M.D., M.Ch., R.U.I., F.R.C.S.I., Kenilworth, near Cape Town, S. Africa.

The following gentleman was proposed for election :—Thomas Howard Morgan, M.B., C.M.Ed., F.R.C.S.Eng., Birmingham, and Queensland, Australia.

SPECIMENS.

THREE UTERI REMOVED BY VAGINAL HYSTERECTOMY FOR MALIGNANT DISEASE. Under the care of F. A. PURCELL, M.D.

Case I.—Mary C., aged 33, the wife of a R.A. gunner, quartered in Ireland, admitted into the Cancer hospital on January 21, 1896. Married at 19. Mother of three children ; youngest 11 years old. No miscarriages. Catamenia commenced at age of 14. Has always been in good health. Regular, and had no great losses. No pain. Three years ago she suffered from a watery discharge, frequently blood-stained. Had pain in the back and hips. Progressive weakness and emaciation. In May, 1895, at the Rotunda hospital, Dublin, Dr. Smyly performed supra-vaginal amputation of the neck ; during the last six months her symp-

toms returned, and now she has a foul smelling vaginal discharge and backache. The stump left after the previous operation is found ulcerated and excavated, the edges of the cavity infiltrated by hard growth, more so anteriorly; vaginal walls are not affected; the body of uterus is mobile, the broad ligaments apparently normal.

January 25.—Vaginal hysterectomy was performed. Owing to the cicatrization after the supra-vaginal operation, the anterior portion of the body was very strongly united with the bladder wall; in trying to separate them the bladder got torn, the uterus was delivered, after which the rent in the bladder was closed by five silk sutures, a self-retaining catheter was inserted into the bladder and not clamped, the vagina had a drain put in, and was loosely packed with iodoform gauze. During the next four days twenty to thirty ounces of urine *per diem* came away by catheter; on the fifth day some leakage took place, *per vaginam*, which gradually got less, and has now ceased without doing anything further to the rent. She has made a good recovery.

The specimen in this case consists of the rounded body of the uterus only, the cervix is absent, the lower part where the cervix should be is deeply excavated and extensively ulcerated, and here the tissue is very friable. The body of the uterus is somewhat enlarged and very hard. The peritoneal surface is quite smooth, and the uterine cavity is not dilated and is smooth. The disease to the naked eye is mainly confined to the lower portion adjoining the cervix, but there is a mass of disease infiltrating the uterine wall (as seen on section) and extending to within a short distance of the fundus, becoming less as it advances upwards.

The microscopical appearances are those of epithelioma; masses of epithelial cells, irregular in size and shape, are extending throughout the section in all its extent through intertwining strands of fibro-muscular tissue. Many cell nests, some of large size, are seen. Evidence of rapid proliferation. The section was taken from the lower part of the body, about the situation of the os internum.

This case is one of recurrence and the disease extending upwards; it proves how much more satisfactory would have been the present condition of this case if total extirpation had been performed at the time she was admitted into the Rotunda Hospital under Dr. Smyly.

Case II.—Maria M. S., from Portsmouth, recommended from the Chelsea Hospital for Women, admitted to the Cancer Hospital, February 4, 1896, aged 55, married, mother of eight children (including twins) and four miscarriages, no previous severe illness. Complains of a vaginal discharge and pain in the back. Dates her present condition from June, 1895, when severe hæmorrhage came on, compelling her to lie up, since which she has had several losses, foul discharge, pain in the back and down the hips, progressive emaciation and weakness.

Present condition.—Infiltration of the cervix with carcinoma, breaking down posteriorly, mobility impaired, some thickening of the left broad ligament, disease in the body.

February 8.—Vaginal hysterectomy performed. There was some difficulty in ante-verting the fundus, caused by posterior adhesions. The uterus gave way during its extraction, through its neck, friable from infiltration of disease, the neck portion was got away after separating the fundus, some forceps were allowed to remain on, which were taken off thirty-six hours after, a vaginal drain was inserted and parts loosely packed with iodoform gauze, a catheter placed in the bladder. Patient has made an uninterrupted recovery.

This specimen consists of the body of the uterus only, together with the left tube and ovary and part of the right tube and broad ligament, the cervix having been apparently torn off (probably got mislaid and not saved). The uterus is somewhat enlarged and the torn lower portion shows extensive disease of the whole thickness of the wall. The cavity of the uterus is dilated but smooth; the walls at the fundus do not show any extensive naked eye changes, the disease being mainly confined to the lower portion, though

strands and nodules of infiltrating disease may be traced almost to the fundus.

The exterior of the uterus is smooth, except laterally, where it is much torn, especially at the lower part (apparently during operation).

Microscopically the condition is one of extensive epitheliomatous infiltration, masses and columns of epithelial cells extending through the tissue in all directions. The individual cells are very irregular in size and shape, and there is a marked karyokinesis, evidence of active cell division, cell nests few in number.

Case III.—Emma H., aged 50, of Shepherd's Bush, sent to me by Mr. Alfred E. Barrett, of Addison Terrace, admitted to the Cancer Hospital January 31, 1896, mother of one child, aged 25 years. Two years ago had uterine hæmorrhage and a thin watery discharge, constant desire to micturate, constipation habitual, slight emaciation. Suffered from inflammation of the womb seventeen years ago.

Present State.—Vaginal mucous membrane is red and inflamed, hypertrophy of cervix, uterus enlarged with impaired mobility, os not ulcerated.

February 8.—Vaginal hysterectomy performed, extreme difficulty experienced in anteverting the fundus and in extracting it, owing to hardness and size of body of uterus; the walls of the neck, friable from disease, gave way and tore away leaving the os, which was removed after the body.

A pair of forceps was left on. Iodoform gauze loosely packed and a catheter passed into bladder. Thirty-six hours after operation the forceps was removed, when the vagina was repacked; very little discharge. Urine copious. Has made a good recovery.

The Specimen.—The uterus in this case is much enlarged. The cervix is separate from the rest of the uterus, having been torn off during the course of the operation. The mucosa of the vaginal surface of the cervix is quite smooth and presents no naked eye change, except a smooth rounded nodule, especially projecting from os, but the torn sur-

face and the interior of the cervical canal present evidences of very extensive disease, the tissue being infiltrated through its whole thickness, and the canal being rough from ulceration. The cavity of the body is much dilated and is filled by a large, ragged polypoid mass of fungating tissue. The walls are infiltrated throughout, and the peritoneal surface is ragged and irregular from adhesions. Microscopically it presents the appearances of an adeno-carcinoma. There are traces of atypical gland formation of the pattern of the uterine glands, penetrating the tissue in every direction. There is also a fair amount of fibrous tissue.

Report of Macroscopic Appearance of the Uteri upon Removal.
By H. G. Plimmer.

Case I.—Uterus measured three and a-half inches in length and three inches in breadth. Wall very much thickened, but soft. There was an excavated growth, very vascular, which had completely destroyed the cervix.

Case II.—Uterus measured three inches in length and two and three-quarter inches in width. The cervix was completely destroyed by a fungating growth, not very vascular.

Case III.—Uterus measured four and three-quarter inches at longest part, but as cervix was torn off it is not sufficient ; width was three and a-half inches ; very soft, thick and vascular. A large mass of irregular, soft red growth, filled the body of the uterus.

The PRESIDENT, in thanking Dr. Purcell for his specimens, said that whatever the ultimate results, the patients were at least temporarily benefited.

Dr. HEYWOOD SMITH asked whether it was, after all, an advantage to antevert or retrovert the fundus in performing hysterectomy. Thus in two of Dr. Purcell's cases the cervix was torn through ; and even if this were not done, the cancerous cervix was apt to be turned into the peritoneal cavity, resulting in soiling with the breaking-down products. Would it not be better, as a rule, to simply draw the cervix straight down ?

Mr. BOWREMAN JESSETT thought that anteversion or retroversion of the fundus was important, as it allowed of much freer access to the broad ligaments, the separation being effected beyond the ovaries and tubes, and thus the great principle of cutting as far as possible from the disease was carried out. The question arose how far, in cases of this kind, the patients were ultimately benefited. There could be no question as to the immediate benefit in the relief of pain and the prevention of exhausting discharges. As regards the tearing away of the cervix, he had seen this happen in one case of advanced disease of the cervix by simple downward traction of the cervix; he did not think that bringing down the fundus increased the risk. He felt sure that the ligature was much better than the forceps for arresting hæmorrhage.

Dr. BANTOCK said that the first case illustrated a point on which he laid stress in a discussion following a paper of Mr. Jessett's on supra-vaginal amputation, when he said that he did not regard it as good practice to remove the cervix alone in cases of cancer. He also did not see the advantage of anteverting the fundus; and he thought that doing this must cause risk of peritoneal infection. His own practice was to work up on both sides as far as possible, and then to free the uterus on one side from below up, after which the fundus was drawn down and separated from above.

Mr. TAYLOR (Birmingham) said it would be interesting and instructive to hear from Dr. Purcell at a later date the after-history of these cases. He thought all of them were too far advanced for good results to be expected. He agreed with Mr. Jessett as to the temporary benefit derived in the relief from pain and discharges, but he questioned whether life was prolonged.

Dr. PURCELL, in reply, said that he would shortly state his method of operation. He placed the patient in the extreme lithotomy position. Two duck bill specula were inserted, which brought parts into view. The vagina was well douched out with warm carbolic water; now if a

cauliflower growth were present this was amputated away with scissors, or if the os was foul and ulcerated, it was curetted, cleaned, and plugged with iodoform gauze or cotton wool. Then he seized the neck or stump with vulcellæ and brought it gradually down; passed a sound into bladder to note its boundary on the neck. He then made an incision on the anterior surface of the cervix near to the bladder boundary, and as far beyond the disease of the cervix as possible, separating the vaginal tissue anteriorly and separating the bladder upwards, the peritoneum being not yet opened. The circular incision was carried round through the vaginal mucous membrane clear of the diseased os; the lower uterine arteries on both sides were secured by a silk ligature passed through the substance by means of an aneurism needle, tied, clamped and divided off. The peritoneum posteriorly was left intact; the peritoneal cavity was then opened anteriorly, and the opening torn fully by the fingers; the anterior surface of the body of the uterus was thus exposed, seized by vulcellæ and coaxed down until the fundus was brought out anteriorly. The left broad ligament now appeared, the tube and ovary were drawn down and were not included in the ligaturing of the broad ligament, which was tied from above downwards with silk, clamped and divided, one end of the silk ligatures being left long. Delivering the uterus a little more, the right tube and ovary came down and the left broad ligament was tied in the same way from fundus to neck—tied, clamped and divided. To separate the posterior vaginal attachment and peritoneum of the posterior *cul-de-sac*, which had not been opened in the first circular incision, was but the work of a few snips of the scissors; the uterus was entirely delivered and no soiling of the peritoneum occurred, the fingers not passing into the pelvis, and all the work of separation being done in view and outside. All vessels were tied with silk, one end left long, forceps removed, parts douched out with warm boric solution to clean out the peritoneal cavity, then dried.

Systematically carried out the operation was extremely

simple, and in favourable cases might be done in fifteen to thirty minutes ; a very extensively diseased uterus which might be much enlarged might require great coaxing to deliver. There were certainly many advantages in delivering anteriorly in place of through Douglas' *cul-de-sac*. In no way could the broad ligaments be so easily approached. The entire work of tying them, delivering the uterus, could be done before the posterior vaginal attachments were divided. One could see all that was to be done, dispensing with speculæ or retractors, and no extra strain was made on the parts. Anteriorly the fundus almost slides out.

Drainage.—If forceps had to be left on he simply packed loosely around them iodoform gauze ; forceps could be removed after thirty-six hours. When no forceps were left on, the vagina had a Tait's glass drain tube inserted, around which was loosely packed iodoform gauze, to be renewed if rendered moist or saturated by discharge. A self-retaining catheter was passed into the bladder and the whole vulva was wrapped up in absorbent cotton wool and fixed by a perineal bandage. The patient was placed in bed, a pillow under her knees and hot water bottles to surround her. If after four days no *contretemps* occurred, the patient made a rapid and satisfactory recovery, the vault of the vagina closed in and all ligatures came away. He generally had two assistants, but had often had only one. His advice was to have the assistance of one as good if not better than oneself. Any soiling of the hands was to be cleaned by renewed washing, he always had placed beside him a basin of warm 2 per cent. carbolised water.

The difficulty of the operation depended on the size of the body of the diseased uterus in relation to the narrowness of the vagina, as one of these specimens presented, yet in this case the uterus was coaxed out without resorting to a perineal incision. As Mr. Jessett had remarked, the uterus had been known to tear off above the neck where traction by the neck had been made, and where ligaturing and separating of the broad ligaments had been undertaken from below upwards as mentioned by Dr. Granville Bantock.

As to the statistics of his series of cases he must postpone these to some future occasion. Death immediately consequent on the operation was now happily rare.

VENTRO-FIXATION OR VENTRO-SUSPENSION OF UTERUS.

By MAYO ROBSON, F.R.C.S., Vice-President of the British Gynæcological Society; Hon. Vice-President International Congress of Gynæcology; Senior Surgeon General Infirmary at Leeds; and Professor of Surgery in the Yorkshire College.

Mr. PRESIDENT,—When I acceded to your kind request to open this discussion I think I scarcely realised the importance of the task for which I was making myself responsible until I sat down to put my thoughts on paper, for the subject is an extremely important one, in that it deals with a method of treatment the position of which is not yet fixed in gynæcological practice, since these operations are as vigorously defended by many able gynæcologists as they are denounced as unnecessary or unsatisfactory by others.

As is usually the case the truth probably lies between the two extremes, and I trust that in the discussion to-night we shall be able to assist in more nearly fixing the real value of the operations both as to their immediate and ultimate results.

In estimating the value of operations of expediency which are done for the purpose of giving relief to suffering and not for the saving of life, we have to consider them from four points of view. First, with regard to their necessity; next, as to their safety; thirdly, as to their efficiency; and fourthly, as to whether they leave a patient less fitted for life in other ways.

In discussing the subject of ventro-fixation or of ventro-suspension of the uterus, we are considering operations of expediency undertaken for the relief of symptoms dependent on retro-flexion or retro-version of the uterus with or without adhesions or on severe prolapsus uteri, all of which,

though not placing life in jeopardy, may make existence so wretched as to lead their subjects to seek some relief, even if attended with a little risk.

The recent advances in surgery have led to many developments of a like nature, as witnessed by the radical cure of non-strangulated hernia, the removal of the vermiform appendix in recurrent appendicitis, osteotomy for deformities, laparotomy for the removal of adhesions in recurring abdominal pains, and many other similar procedures, all of which are sanctioned by professional opinion and demanded by suffering humanity.

It seems to me that we may with advantage consider the question of necessity first, and in answering this, the gynæcological surgeon must satisfy himself that all minor measures have been first tried, and that every apparent complication has been corrected without giving relief, before the question of operation is entered on. If, then, he is satisfied that all that is possible has been done, short of operation, and that ventro-fixation or suspension will be likely to prove of benefit, and if the patient after a full explanation as to the nature of the procedure and the possible risk, elects to submit to operation rather than to continue in a chronic state of discomfort and pain, I should think the advisability of operating fully established.

In answer to the question, Is it safe? Unless we can reasonably answer this in the affirmative, we must be content to give as much relief as is possible by minor remedial measures, and by mechanical supports, and to eschew ventro-fixation. I anticipate, however, we shall find from those present that the general experience of these operations, so far as safety is concerned, is the same as my own, for the sixteen cases on which I have operated have recovered without giving me the least anxiety. Moreover, I cannot see why, if careful asepsis be observed, and if ordinary skill be exercised, there should be any risk, even when, as in hysterorrhaphy, the peritoneum has to be opened. In Alexander's operation, where the serous cavity is not

interfered with, I think we can confidently say that the operation is practically devoid of risk. There are, however, in all operations, no matter how safe in themselves, accidental dangers in the shape of anæsthetic accidents, chest complications, or wound complications, which may give anxiety or even lead to a fatal termination, and which have always to be taken into consideration when the medical attendant recommends operation.

The answer to the third question—Are these operations efficient?—is what we should be able to determine in a great measure in the discussion this evening, for sufficient time has elapsed since the earlier of these operations was performed for us to have ascertained the after histories in many cases. There can be no doubt about the immediate relief to pain and pelvic distress, or as to the beneficial effect on the patient's general health in nearly every case, but what we want to ascertain is, does the relief last, or is there a tendency to relapse?

Again, probably some members may be able to give their experience of the influence of pregnancy on the uterus after fixation by hysterorrhaphy. It will be interesting also to know whether the adventitious adhesions predispose to abortion or cause pain during the expansion necessitated by the uprising of the gravid womb, as well as to know whether, after the puerperal period has passed, there is a tendency to a resumption of the old displacement for which the operation was originally performed.

My colleague, Dr. Braithwaite, tells me that he knows of one case in which, after ventro-fixation, the patient aborted at the fourth month, apparently as the result of the abnormal fixation of the uterus, but that after recovery the uterus did not relapse into the previous retroflexion. In another case pregnancy advanced to the full time, and delivery was effected without inconvenience or difficulty.

I am myself able to speak as to the immediate relief following on operation as well as to the improvement in general health. I am also able to vouch for the permanent

beneficial effects of the operation on some of my patients as shown by the complete restoration to health, the resumption of marital relations previously impracticable on account of dyspareunia, the loss of all pelvic discomfort, and the absence of the necessity of further medical attention. While I am able to give this good testimony in some cases, in others, and these have been hospital patients for the most part suffering from severe procidentia who have had to resume work not long after leaving my hands, the relief has been merely temporary and the displacement has after all required treating by mechanical supports.

Fourthly—Do these operations leave a patient in any way less fitted for life? This question is of no little import, and can be best answered by mentioning any possible sources of weakness, such as hernia or intestinal obstruction.

After any abdominal section a ventral hernia is a possibility, but by carefully suturing the parietes layer by layer, and by careful after-treatment, there is very little fear of permanently weakening the abdominal walls, and, therefore, the danger of subsequent hernia should be reduced to a minimum. The danger of intestinal obstruction from the incarceration or strangulation of a knuckle of bowel by an adventitious band left between the abdominal wall and the uterus is a possibility. So far no case of this kind has been reported. The danger is, however, a real though a remote one, and Werth, of Keil, meets the objection by suturing the uterus to the bladder, and in addition attaches both to the abdominal wall. The fixation of the uterus in a false position and its immobility are conditions of no import to the patient, if they are associated with relief to distressing symptoms and unconnected with any symptoms of their own as appears to be the case, though it certainly does appear to be anomalous to try to relieve one displacement by producing another.

Practically there are two classes of operations to be taken into consideration: the one extra-peritoneal, consisting of Alexander's operation or its modifications, the other intra-

peritoneal, in which an abdominal section forms a necessary preliminary to the hysterorrhaphy. It is quite unnecessary to enter into a description of these operations in a society like this, where everyone must be so fully acquainted with the various procedures, but there are certain modifications which may be worth mentioning: for instance, Alexander's operation, as described by its originator, is not so simple as it would appear, but if the modification of laying open the inguinal canal be adopted, the round ligaments are most easily discovered, and can be drawn on until the appearance of the collar of peritoneum, which may be peeled back as far as needful, or until the ligaments are taut, after which they are easily fixed by several sutures, the inguinal canal being repaired before closing the wound.

Professor Köcher, of Berne, speaks most favourably of this operation, and in the few cases where I have employed it I have thought it to be very satisfactory from an anatomical point of view, so that if Alexander's operation be thought advisable, this would seem to me to be the most efficient method of performing it. On the whole I have been disappointed with the permanent results of Alexander's operations in "prolapsus uteri," unless other plastic procedures to the perineum and vagina have been employed as supplementary measures. In retroflexion with adherent appendages it is quite useless, and although in retroflexion or in retroversion without adhesions the operation would probably be efficient, I have yet to find the case where the other measures have proved so inefficient as to render operative treatment of this kind necessary.

Perhaps in some cases of prolapse of the ovaries with a backward displacement of the uterus, where any mechanical support tends to irritate, and where rest and general treatment fail to benefit, Alexander's operation may be called for, and may prove serviceable.

On the whole, I think that this operation has a decidedly limited field of usefulness, much more so in fact, than in theory one might be led to expect.

I have performed the operation five times, and in only one have I been completely satisfied with the permanent result, that being a case of retroflexion with prolapse, the uterus being in very good position six months later, and the patient being in good health two years after.

One case of extreme procidentia uteri, operated on six weeks ago, is well, and the uterus is in good position, but it is too early to speak of results, as she has not yet completely recovered from the subsequent colporrhaphy and perinæorrhaphy which I thought to be necessary to give permanent relief. (*Later Note.*—Uterus well supported and in good position three months after.)

In one case of procidentia the operation was a complete failure, and had to be supplemented by hysterorrhaphy, which, when the patient was last seen, seemed to have completely answered. One patient was well three months afterwards, but on writing to her she had changed her address, and I was unable to get her further history. In the fifth case, one of retroflexion, the relief was only temporary, probably on account of adhesions, and subsequent treatment has been required.

Between Alexander's operation and ventro-fixation are the two operations known as Wylie's or Baer's operation, and that proposed by Dr. Dudley. They raise and draw forward the uterus by shortening the round ligaments, which, however, are reached through an opened peritoneum. I have no experience of either operation, and I fail to see in what particulars they present advantages over hysterorrhaphy, though I should think the support must be less satisfactory both at the time and subsequently.

Where it is necessary to lift up and fix forward the uterus, hysterorrhaphy or ventro-fixation is undoubtedly the most efficient method, and where there are adhesions in the pelvis caused by appendage disease or by pelvic peritonitis, it may be the only effectual means of giving relief; moreover, this is often a truly conservative operation, since it enables many cases which were formerly treated by oöpho-

rectomy to be saved that undesirable mutilation, for after the appendages have been detached from their abnormal positions they, along with the uterus, are raised and prevented from resuming their faulty attachments. With the results of this operation, in retro-flexion or version with adhesions, I have been very gratified, and in those exceptional cases where the patient's sufferings are incapable of relief by any of the ordinary means, short of operation, or where the patient through want of leisure or want of means is incapable of following out treatment by rest, this method is certainly one worthy of serious consideration. In prolapsus uteri, hysterorrhaphy is recommended by some authorities as an efficient means of treatment when supplemented by colporrhaphy and perinæorrhaphy.

But the fact of certain of these advanced gynæcologists recommending hysterectomy where the patient is past the menopause, proves to my mind that their experience of hysterorrhaphy in complete procidentia is somewhat like my own, not altogether satisfactory.

Hysterectomy in these cases does not enter into the question, but I cannot help mentioning it in order that I may express my views that I consider it utterly unjustifiable.

Keith's operation of removing one ovary and fixing the pedicle in the abdominal wound would come under the same class of operations as ovariectomy combined with hysterorrhaphy, but here it is somewhat difficult to apportion the benefits resulting from the ventro-fixation, as other and distinct questions are raised.

In some cases of chronic invalidism the result of appendage disease associated with retroflexion, and when the appendages are too much diseased to be worth retaining, there is a distinct advantage in performing ventro-fixation at the time the ovariectomy is done. In the four cases where I have done this combined operation three of the patients are quite well after three years, eighteen months, and nine months respectively, and the fourth case was quite well when

last heard of, three months subsequent to operation. These operations were, however, not done by Keith's method.

Of the seven other hysterorrhaphies which I have performed, two were done for retroflexion with adherent appendages, and after the appendages had been loosened without being removed, the uterus was raised and fixed. Both patients were quite well when heard of some months after.

A third case of retroflexion with slight adhesions incapable of treatment by pessaries was also well when last heard of. Of the remaining cases where ventro-fixation was performed for severe prolapse, two were well some months afterwards, one was considerably benefited, but required to wear a pessary, and the fourth was only temporarily relieved and returned nine months afterwards for the treatment of a rectocele and "prolapsus uteri."

My colleague, Dr. Braithwaite, has been kind enough to furnish me with a list of the cases, eleven in number, in which he has performed ventro-fixation for backward displacements of the uterus; in five ovariectomy and ventro-fixation were combined, and in all but one very good results followed. In the exceptional case a pessary was subsequently required. In the remaining six cases the patients, when last seen, at varying periods after operation, expressed themselves as satisfied with the results, and the uterus on examination was in good position.

From the foregoing remarks it will be seen (1) That, in my opinion, in the treatment of retro-flexion or retro-version, after the failure of other means, ventro-fixation offers a means of treatment leading in so many cases to permanent relief or cure, that the operation is one which is likely to have a permanent place in surgery.

(2) That the necessity for the operation usually only arises where adhesions are present, other cases, with few exceptions, generally yielding to less heroic measures, or, if operation be thought needful, to the less serious procedure of shortening the round ligaments.

(3) That in the treatment of extreme prolapse or procidentia uteri, ventro-fixation or ventro-suspension without other supplementary operative procedures usually results in disappointment, but that in certain cases, when supplemented by colporrhaphy and perinæorrhaphy, the results are sufficiently good to encourage the gynæcologist to advise operation, where all the ordinary means have failed to give sufficient relief.

Dr. LEITH NAPIER said he wished to supplement rather than criticise Professor Mayo Robson's remarks, and he judged that the object of the discussion was the results rather than the methods of operation. In a recent number of the *Zeitschrift für Geb. u. Gyn.* was an important paper on the subject, in which the results of 154 operations were given. In 74 cases pregnancy followed, 54 being delivered at term, and 3 prematurely, 6 aborted (8 were delivered a second time, and 3 a third time); 10 were still pregnant, and 1 died from conditions apart from the operation or pregnancy. He hoped to give a full account of this paper in the next number of the Journal. It had been stated as an objection to the operation that when followed by pregnancy a larger proportion than usual required artificial delivery, and that cross-births were more common owing to the fact that the uterus expanded transversely. But the criticism was somewhat exaggerated, because such patients would not have become pregnant at all without the operation, but would have remained chronic invalids. Two cases had been recorded in which Cæsarian section had been required; but in neither case was the ventro-fixation performed in accordance with the surgical principles required for this operation. He proceeded, he said, to redeem a promise made to the Society when he read a paper on this subject in 1893, namely, to give some account of after results. In the *British Medical Journal* of the same year he published, with Dr. Schacht, all the cases then operated upon at the Chelsea Hospital for Women. He would now give the after-histories of his own cases. (1)

Operation in February, 1892. In May, 1893, she was delivered normally by the St. Bartholomew's Hospital Charity ; Drs. Griffith and Robinson took great interest in the case and saw the confinement. She had a second natural labour in August, 1895. After each confinement he saw her, and found the uterus in good position. (2) Operation in August, 1892. She was married in December, 1893, at the age of 36, and in December, 1895, she had a normal labour. He saw her in the following February, when he found the uterus in good position, and the patient had been able to do her work well since the operation. (3) Operation in March, 1893. In August, 1894, she had hæmorrhage, though she had not missed a period. In January of this year he saw her, and found she was six weeks pregnant. A fortnight later, after waiting in a crowd outside a theatre and being jostled, she miscarried. (4) This patient had passed through the menopause early, viz., at 38. The uterus had given no further trouble. (5) This patient had not become pregnant ; she was in good health when he last heard from her. He agreed with Professor Mayo Robson that the operation was disappointing in the case of procidentia, and that *retro-flexio fixata* was the one condition where it was strongly indicated.

Dr. GEORGE KEITH said he would like to correct an impression conveyed in Mr. Mayo Robson's paper concerning the operation practised by his father, the late Dr. Thomas Keith. His father never removed both the ovaries unless they were diseased. His usual practice was to remove the right ovary, fixing the stump of it to the wound, and leaving the left appendages untouched. When both ovaries were diseased and required removal, he only fixed the stump of one of them to the wound.

Mr. J. W. TAYLOR (Birmingham) thought that it could not be too plainly stated by the Fellows of the Society that only a small minority of cases required operations of this kind. He began to do Alexander's operation ten or twelve years ago, and operated in about a dozen cases. In uncom-

plicated cases the results were fairly good, and two patients afterwards became pregnant and went on to full term. But the operation had two drawbacks : firstly, the abdominal wall had to be incised on each side at its weakest part, and even when the sutures were buried there was considerable risk of hernia afterwards ; secondly, in some cases it was not possible to diagnose adhesions beforehand, and if these were present it was not possible to draw out the round ligaments. Finding that to deal with adhesions the abdomen required to be opened, he began to do ventro-fixation, and operated on twenty cases by this method. At first he did not bury the sutures, and three cases presented a recurrence ; in the remaining seventeen the operation had been entirely successful. But he did not think that ventro-fixation was satisfactory in cases of procidentia, some kind of plastic operation required to be done in addition, and even when perinæorrhaphy was performed there was usually some prolapse later of the loose vaginal walls, so that the patient felt that the condition had recurred. Latterly he had given up ventro-fixation in favour of vagino-fixation, except in cases where the abdomen required to be opened for some other condition, as diseases of the appendages. In vagino-fixation he opened the peritoneum and sutured the fundus to the edges of the vaginal wound, thereby turning the cervix upwards and backwards, and securing the uterus in normal anteversion across the pelvic outlet. He thought it a better operation for displacement and prolapse, a safer proceeding than the abdominal operation, and very little inferior to the latter in the opportunity it afforded of simultaneous operation on the ovaries and tubes. He had had seventeen cases of vagino-fixation, and they had all been successful.

Dr. FRED EDGE (Wolverhampton), said that his experience was much the same as Mr. Taylor's. He began with Kocher's modification of Alexander's operation, and he gave it up for reasons similar to Mr. Taylor's. He then did ventro-fixation. In one case there was relapse, and

he had an opportunity of ascertaining the condition nine months after the operation. The relapse was so complete that he thought the adhesion of the uterus to the abdominal wall must have failed altogether, and he decided to try vagino-fixation. But he found a good deal of difficulty, for it turned out that there were well-marked adhesions, one of which formed a band, 3 inches long and the thickness of a finger, passing from the fundus to the abdominal wall. There was no relapse after the vagino-fixation. In all he had performed ventro-fixation twelve times, but now he did not do it except in association with other abdominal operations. He had done vagino-fixation twenty times, alone, and after vaginal coeliotomy, and had been much impressed with the results of it, which he could only describe as brilliant, especially when associated with cystocele. Indeed, he thought it was the one cure for cystocele, for by the condition of the operation the fundus could not become retroflexed without dragging up the cystocele, and the latter could not come down without drawing the fundus forward, and the two tendencies therefore balanced each other.

Dr. LEITH NAPIER asked Dr. Edge how long a time had elapsed since his vagino-fixation operations, for it had been laid down as a maxim, with which he quite agreed, that no plastic operation of this kind could be said to have resulted in a cure until after the lapse of two years.

Dr. EDGE replied that he had only recently done vagino-fixation, and his results did not date further back than twelve months ; in the case of ventro-fixation they dated about three or four years ; but he had not his statistics with him.

Dr. SCHACHT's experience led him to confirm Professor Mayo Robson's views. Dr. Leith Napier had alluded to some cases which they had published together, and had given the after histories of his own cases. Two of that series belonged to him (Dr. Schacht), one of them he had seen at intervals for some time after the operation, and the

last reports were very satisfactory ; but of late he had lost sight of the patient. The second case was operated on in July, 1892, previous to which she had been unable for four years to do her work, and had been under many kinds of treatment ; in February, 1893, she miscarried at four months, after being sterile for four years. There seemed to be no sufficient reason for the miscarriage, unless the stitching had prevented proper uterine expansion. She became pregnant again, and he was fortunate enough to be able to see her at the time of her confinement ; everything went on normally, the period being at term ; but there was a little longer delay than usual over the expulsion of the placenta, and her medical attendant sent for him. Ordinary expression was sufficient to expel it, and he had the opportunity of feeling the uterus. It was quite clear that the uterus was firmly adherent to the abdominal wall, there being a prominent hard ridge in the situation of the sutures, with softer uterine tissue on each side. This ridge may have interfered with the expansion of the uterus at the time of the miscarriage, and it may also have hindered the normal uterine contraction after delivery, for there was a little more hæmorrhage than usual. The confinement was in January of this year ; on March 11 he saw her, and the uterus had then returned to its normal size, and was firmly fixed to the abdominal wall. This was the first child born to her since her marriage, though prior to the operation she had had one miscarriage.

He would like to ask Professor Mayo Robson as to the kind of sutures he recommended and as to their position. It seemed to him that the possibility of pregnancy had to be considered. Would not the position of the sutures influence the results from this point of view ? Thus if the sutures were placed low on the uterus would they better allow of uterine expansion ? As regards the relative merits of ventro-suspension and ventro-fixation he thought the question of future pregnancy would again come in, for he thought it doubtful whether after fixation by means of the

broad ligaments there would be the same necessary contraction of the ligaments after the expansion as would be possible in ventro-fixation. He had had no experience of vagino-fixation ; but he thought the same questions would apply to this operation. After the climacteric there could be but few cases requiring a major operation.

The discussion was then adjourned to the next meeting of the Society.

THE BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, APRIL 9, 1896.

CLEMENT GODSON, M.D., PRESIDENT, IN THE CHAIR.

PRESENT : 27 Fellows and Visitors.

Thos. H. Morgan, M.B.Ed., F.R.C.S., of Queensland, Australia, was elected a Fellow of the Society.

J. S. Downes, M.B., C.M.Glas., of Romford Road, London, was proposed for election.

SPECIMEN.

PEDUNCULATED MYOMA OF THE UTERUS, CAUSING INTES-
TINAL OBSTRUCTION. By WINSON RAMSAY, M.D.,
M.S., Bournemouth.

The patient had for a long time had much difficulty with the bowels ; this became acute and obstruction came on. When seen, she was collapsed and vomiting fæculent matter. He found a large tumour occupying and completely filling the pelvis. The symptoms pointed to obstruction in the small intestine, and he advised abdominal section. On opening the abdomen the tumour was seen, with the small intestine coiled round and adherent to it. To the posterior portion of the tumour was attached the jejunum, with a sharp kink in it. After freeing the intestines he turned his attention to the tumour ; this was so firmly fixed in the pelvis that he had great difficulty in getting it up ; but by combined pulling from above and pushing from below, he succeeded. He then found the uterus in front of the tumour ; a narrow vascular pedicle connected the two. The pedicle was found to spring from the left corner of the uterus. The patient was now convalescent.

ADJOURNED DISCUSSION ON VENTRO-FIXATION AND VENTRO-SUSPENSION OF THE UTERUS, AND ALLIED OPERATIONS.

The SECRETARY read the following communication from Dr. Bantock, who was unable to be present :—


Before entering upon the subject under discussion I should like to compliment Mr. Mayo Robson on the moderation of language, the lucidity of expression, and the judicial spirit which characterised his discourse. It was free from the enthusiasm which so often exaggerates the importance of a subject, and was marked by a nice discrimination and balancing of evidence which is not an unfailing characteristic of similar productions.

Now, sir, I claim the right to discuss the method of treatment and the operations in question, not because of a great amount of experience in them, but on the ground that I have not performed the operation of ventro-fixation or ventro-suspension in a single instance. That may seem to some of you a strange qualification for such a task, but I hope to make it clear that it is not so strange as it may at first sight seem.

When Dr. Alexander published his little book on the operation which goes by his name, I diligently studied the subject. I looked carefully into the arguments he adduced and the evidence he brought forward to support his views, and I very soon came to the conclusion that the operation was one I was not likely to put into practice. It was evident to me that the principle was entirely wrong. I presume that no one will contradict me when I say that the vast majority of cases of so-called prolapsus uteri are cases of cystocele, with subsequent dragging down of the uterus. Hence it follows that the fault lies not in the failure of the suspensory but of the supporting structures. It struck me, therefore that the idea of holding up the uterus from above was wholly wrong in principle, and that an operation founded on that principle was only likely to result in failure. Moreover, if you will examine Savage's plate illustrating the

effect of traction upon the uterus from below, you will see that the last structures to come into play are the round ligaments. Nor was I unacquainted with the results of the various plastic operations in the vagina, or the beneficial effect of a properly adapted diaphragm pessary, by which I have been able to afford complete support, either as a preliminary to a plastic operation, or permanently when patients will not submit to operation. My reasoning led me to anticipate a failure, and such has been the case, and the testimony of Mr. Mayo Robson and other speakers at the last meeting goes to confirm my anticipations. When Mr. Mayo Robson says, "On the whole I think that this operation has a decidedly limited field of usefulness—much more in fact than in theory one might expect," I would point out that the theory being manifestly wrong, and the facts being shown to be wanting, there remains a negative quantity. I am glad to be able to quote him still more definitely, viz., "On the whole I have been disappointed with the permanent results of Alexander's operation in prolapsus uteri, unless"—and I call special attention to this—"unless other plastic procedures to the perinæum and vagina have been employed as supplementary measures," on which, I would add, the success of the operation, *when obtained*, undoubtedly depends. Hence we get this result, that Mr. Mayo Robson has arrived at a certain conclusion unfavourable to the operation, even after a very limited series of examples, five in number, of which number we can only quote one as satisfactory after a period of six months, while I arrived at the same conclusion without performing a single operation—a fact which I regard with unmingled satisfaction. I feel sure that if operators would limit themselves to the restoration of the supporting structures, they would better consult their patients' welfare and their own peace of mind.

With regard to the operation of ventro-suspension for the cure of retro-displacement, whether version or flexion, I am in precisely the same position. Yet I am not at all surprised at hearing of operations of this kind when I think



of the number of ring pessaries—that abomination of abominations—that I have had to remove from patients I have subsequently cured—I don't merely say relieved—by a properly adapted Hodge of the Albert Smith pattern. I have never seen a case of retroversion, or the much more rare retroflexion, uncomplicated by adhesions, on which I could feel justified in operating, and when I have operated with this condition present, I have done so not on account of the displacement of the uterus, but on account of the far more serious condition of the appendages. In these cases I have been perfectly satisfied with the effect of tying up both broad ligaments—a proceeding which keeps the uterus perfectly in position. I have yet to see a case in which I would open the abdomen for the purpose of freeing the uterus and appendages from adhesions, and leaving them to contract fresh adhesions, and I find it difficult even to imagine the condition that requires such an operation.

It appears to me that we are living in an age in which the *cacoethes operandi* is treading very closely on the heels of the *cacoethes scribendi*.

Professor MAYO ROBSON read the following communication from Dr. O'Connor, of Buenos Ayres, which had been sent to him by Mr. Reginald Harrison :—

During the past twelve months I have performed abdominal fixation of uterus, for prolapse, eight times, and I wish to bring more fully under the notice of the profession the ease and certainty with which this operation may be executed, also the advantages of fibro-serous approximation, so ably advocated by Mr. Greig Smith.

Only this morning I have had an opportunity of realising the danger in anyone attempting to fix the uterus to the anterior parietes without opening the abdominal cavity. I particularly refer to a method of intra-uterine ventrofixation recommended by Mr. Shober. On opening the peritoneal cavity, the omentum covered anteriorly the lower abdominal viscera in all directions, notwithstanding the fact that my two inch incision extended to within half an inch

of the pubes. If I had attempted to fix uterus by a needle passed through womb without opening the peritoneum, to a certainty I would have included the omentum, therefore with this experience, and I have seen the same in other cases, I have strong objections to working in the dark.

In each of the eight cases there has not been the slightest post-operative complication ; all united by first intention ; in no instance did the temperature exceed 100°, and no recurrence of the trouble has been reported, and, although I never order an abdominal belt to be worn afterwards, no ventral hernia has occurred ; to my mind, the latter mishap is due to deficient care in suturing the parietal wound. Of course, a short period only has elapsed, therefore these latter observations can only be tentative.

In a way I feel thankful that I have not as yet been afforded the opportunity of examining the class of adhesion that takes place, nor have any of my patients, as far as I know, tested the same by becoming pregnant. As some of them are young, doubtless the test will be applied.

The operation is carried out as follows :—

The patient having been “acclimatised” to hospital life for a fortnight, during which time sundry repairs are undertaken, curetting endometrium, excision of cervix, and colpo-perinæorrhaphy, if necessary, the bowels are well cleared out with repeated doses of magnesium sulphate ; the day before operation the pubic hair is shaved off, and the skin of abdomen scrubbed with soda, soap and hot water, then washed with turpentine, and a large piece of lint soaked in 1-500 corrosive sublimate applied, and fixed on for the night by antiseptic wool and a bandage.

On the morning of operation a large soap and water enema is given, and immediately before patient is brought into operating room the urine is drawn off.

The patient having been chloroformed, the night's dressing is removed, and the skin all round field of operation is again scrubbed with a sponge soaked in turpentine, and lastly thoroughly washed with Watson Cheyne's strong solution.

(1) An incision two inches in length is made in median line, extending within half an inch of pubes ; all bleeding must be stopped before the peritoneum is picked up with a pair of dissecting forceps and opened ; a few pressure forceps are attached to cut edges of peritoneum, these help greatly in after manipulations.

(2) The left index-finger is passed down below intestines and omentum to uterus, with palmar surface hooking the former upwards. With the tip of finger steadied on the womb I pass down a Muzaux forceps on dorsal aspect of finger, seize uterus and pull it up to wound.

(3) An assistant now takes hold of forceps ; the presenting surface is scarified with the point of a scalpel, some trifling oozing takes place, which is easily arrested by sponge pressure.

(4) At the lower angle of wound a curved needle threaded with silk is passed from without inwards through the rectus muscle and transversalis fascia ; the peritoneum being retracted by pressure forceps (previously applied), the needle is then passed for at least a quarter of an inch in depth into uterus, and made to emerge about half an inch from point of entry ; the peritoneum on the opposite side is next held back, while the needle is passed from within outwards through transversalis fascia and rectus muscle ; in this manner the sutures, at intervals of a third of an inch, are inserted. Any bleeding from needle punctures is arrested by sponge pressure.

(5) The peritoneum is again held back on each side, and these sutures are tied firmly and ends cut off. (Note.—Care must be taken not to tie too tightly, lest the silk sutures should cut through uterus ; firm approximation is all that is necessary.) In this manner the serous covering of uterus is brought into intimate connection with the transversalis fascia and recti for half an inch in width and one inch in length.

(6) Before closing the upper inch of wound, it is desirable to pass a small sponge, held by torsion forceps, into

peritoneal cavity, in order to remove any blood or clot that may be present. The peritoneum is next closed by a continuous fine silk suture ; it is well to pass the first stitch through peritoneum on side next operator, then through uterus, and lastly through peritoneum on the opposite side. In this way the peritoneum is brought into accurate apposition with serous coat of uterus, and prevents a subsequent site for ventral hernia.

The recti muscles in upper portion of wound are then brought together by another continuous fine silk suture, and the skin wound closed in same manner. Iodoform gauze is applied. First dressing is removed on the eighth, and the suture on twelfth day ; patient is allowed out of bed on the fourteenth day.

There is one essential in the closure of this or any abdominal wound, and that is no pocket must be left for the accumulation of serum or blood ; for where these factors are, thither Staphylococci & Co. gather together, nay, more, thrive.

Dr. G. ELDER (Nottingham) said that though his experience was somewhat meagre and of a negative character, he felt, when he seconded the motion for adjournment, that the paper of such an able and eminent surgeon as Professor Mayo Robson demanded further consideration. Many years ago, when Dr. Alexander's book came out, he performed several operations for uncomplicated displacements, but he gave it up for three reasons : (1) on account of the uncertainty of always finding the round ligament ; (2) because the results did not seem to him quite satisfactory ; (3) because it was not devoid of risk. In one case he operated on a patient and the condition recurred ; she went to another town and was operated on again by a gynæcologist of repute, but her second operation was unfortunately fatal. From that time till now he had not felt justified in running the small risk of opening the abdomen in uncomplicated cases, and had found that curetting and plastic operations, with or without a pessary, were successful in

relieving the symptoms and in making the patient's life tolerably comfortable, without risk. When there were adhesions and other treatment had failed, he opened the abdominal cavity, as Dr. Bantock said not primarily on account of the displacement, but on account of the malady which caused it. He was old enough to have seen a good many fashions in gynæcology, and they seemed to be passing through a phase of ventro-fixation, which would, he thought, wear itself out, and he doubted whether the profession would gain in the process. Professor Mayo Robson's paper very properly circumscribed the conditions requiring operation, and for his own part he thought it was time to raise a protest against undue frequency in the performance of these operations.

Dr. WILLIAM ALEXANDER (Liverpool), said that after reading the accounts of the discussion at the last meeting he felt he would like to come up to defend his operation, which had, he thought, been not quite fairly represented by speakers at that meeting. He had done no ventro-fixations or suspensions. He first performed his operation fourteen years ago, and since then had done it several hundred times, and he had always found it fulfil all the conditions he required. The remarks of some of the speakers at the last meeting implied two things which he would like to refute : first, that it was a double abdominal section ; second, that the results were not permanent.

The operation, as he performed it, was as follows :—after the usual preparation an incision one and a half inches long was made over the external abdominal ring ; one or two cuts through the deep fascia exposed the aponeurosis of the external oblique, and the round ligament was then found at once. There was no uncertainty about it. The ligament was then pulled up with forceps, and the nerve which ran along its upper surface was divided, after which the ligament was drawn out. When slack the ligament and the pillars of the external abdominal ring were transfixed with catgut sutures, three of these being passed. He ligatured

any vessels that might require it, and put one stitch in the skin wound, leaving the end of the ligament protruding from the wound to act as a drain. The procedure was then repeated on the opposite side. He contended that there was no more danger in it than in vaccination. Of course there had been modifications, some of which were not devoid of danger; for instance, cutting through the external or internal oblique, and stripping up the peritoneum; the latter made the operation one of abdominal section, but these procedures were quite unnecessary. The only modification he himself employed was the use of catgut instead of silver wire sutures.

Indications.—(a) *Prolapse.*—It could be used for all cases, even those which the advocates of ventro-fixation would not undertake. He first repaired the perinæum when necessary. But perinæorrhaphy alone was not, as Dr. Bantock maintained, a permanent operation. Nor could he agree with Dr. Bantock's views of the pathology of prolapse. The first trouble in prolapse was not cystocele but retroversion, and the shortening of the round ligaments acted, not by suspending, but by anteverting the uterus. He would relate an illustrative case. Three years ago a patient of his, who was very stout, and on whom he would not venture to perform abdominal section, went to a ventro-fixator. He did a perinæorrhaphy but her condition was not improved. He told her she was not a suitable case for ventro-fixation. She then asked him about Alexander's operation, and he told her it would be very dangerous, and even if she got over it she would be just as bad in three months. Another man told her that ventro-fixation was the only possible operation, but that he did not care to do it in her case. She said, "What about Alexander's operation?" "Do you want to lose your life?" said he. Some time after she consulted him (Dr. Alexander), and he shortened the round ligaments. This was in November, 1893. A month ago she wrote to him, saying, "I am much better as far as the old trouble is concerned; it is, I think, a permanent cure." He had had many cases with a somewhat similar history.

(b) *Retroversion*.—For this he performed the same operation, but always put in a Hodge's pessary till the round ligaments had united, otherwise there was undue traction on them and union failed. It was easy to tell whether union had taken place, for then, on pressing against the external abdominal ring, there was traction on the cicatrix. In cases of retroflexion a stem pessary was needed, in addition, to straighten the uterus; it was kept in for three weeks and the Hodge was left in for three weeks longer. For want of this precaution some of his earlier cases were unsuccessful, owing to the falling back of the fundus and the traction on the round ligaments.

Results.—He was able to say that if the operation were properly performed the results were permanent. He had lately been looking up the after histories of a number of his cases, some of which he proceeded to relate, and said that he felt justified in contending that for the treatment both of prolapse and of backward displacements the operation was a success.

Drawbacks.—He admitted that there was a slight tendency to hernia, but he had had no difficulty, in the few cases in which this tendency had shown itself, in controlling it with a truss. Some of his cases had failed, but he had always found that it was for the want of some of the above-mentioned precautions in cases of retroflexion. After miscarriage, also, there was some tendency to relapse, but by the use of a Hodge till convalescence had set in this could be guarded against.

Dr. WINSON RAMSAY (Bournemouth) showed a uterus illustrating an effect of ventro-fixation not touched upon by previous speakers. The patient, aged 55, had suffered from prolapse for years. In February, 1894, he performed ventro-fixation, and she was discharged with her uterus in good position. He heard nothing of her for twelve months, when she came back to him complaining of recurrence. He found the cervix protruding from the vulva, and concluded that the stitches had given way. He therefore performed

hysterectomy, and then found that the fundus was still firmly attached to the abdominal wall, and that the protrusion of the cervix was due to great hypertrophy. She made a good recovery.

Dr. WILLIAM DUNCAN, who spoke in response to an invitation from the President, said that the specimen they had just seen was very interesting because it was a case of supra-vaginal elongation of the cervix, but he presumed that this condition existed at the time of the first operation, and so, although the actual operation was successful, it was hardly a case where they could expect a good result. (Dr. RAMSAY : At the time of the first operation, the uterus was quite normal.) He was very interested in Dr. Alexander's remarks, because his own experience of the operation of shortening the round ligaments had been entirely different. Seven or eight years ago he performed the operation eleven times for prolapse or retroversion ; he found the operation itself quite simple, and did not agree with Dr. Elder as to the uncertainty of finding the round ligaments, but he failed to see how a ligament containing so little muscular tissue could keep up a uterus which was hypertrophied and prolapsed, and all the eleven cases reverted within four months to their original condition. He did not use a stem pessary because he had always regarded, and still regarded, this instrument as dangerous.

Ventro-fixation.—This had to be considered, as Professor Mayo Robson had very properly pointed out, from four points of view.

(1) *Safety.*—He had done five cases and had found them all successful, but the number was, of course, too small to draw general conclusions from, because there was always some risk in opening the abdominal cavity. For this reason, also, the operation should not be undertaken unless other means had been tried without success. He could not agree with Professor Mayo Robson that it was devoid of risk. Still, when they had a case of old-standing prolapse or retroversion where instruments failed to relieve, or could not be

borne, and the patient was incapacitated, he thought it was justifiable to advise operation.

(2) *Permanence*.—He thought this depended in large measure on the method adopted, and especially on the way the sutures were applied. One or two sutures alone were not much good, and he always used five or six, passing one, a double one, through the fundus, and the rest through the anterior surface of the body, so as to bring this well into contact with the abdominal wall. The sutures should pass through a small portion of the muscular tissue of the uterus. He could not yet speak as to permanent results, as none of his cases dated further back than thirteen months; but so far all of them were cured, both as regards the position of the uterus and as regards symptoms. The last case had just left the Middlesex Hospital, and was interesting in that the operation had been performed twice before by another operator. She came to him with a ventral hernia and with the fundus low in Douglas' pouch; she was quite unable to follow her occupation; so he operated for a third time. When she went out the uterus was in good position and seemed quite firm.

(3) *Indications*.—The best results followed in cases of prolapse or retroversion, without adhesions, when pessaries had failed. In cases of retroflexion with adhesions, he thought it very doubtful whether ventro-fixation alone was of much use. Professor Mayo Robson said that in such cases he separated the adhesions and then fixed the uterus without removing the appendages. But when the appendages had been bound down for some time they were generally so diseased as to require removal, and he had done this several times, fixing the stumps to the abdominal wall. Some years ago he had a case in which, after freeing adhesions, he removed only the right appendages, fixing the stump to the wound, and she was sent home, but some months later she returned with extra-uterine gestation on the left side. And so he thought it was wise, when the tubes and ovaries were bound down, and the abdominal ostia of the tubes were closed, to remove the appendages of both sides.

He had never performed vagino-fixation, but he could not believe that it would ever come into general favour.

(4) *Complications.*—As regards ventral hernia everything depended on the way the abdominal wall was sutured. If the sheath of the rectus were well brought together with a separate layer of sutures there was not much risk of hernia.

Finally, his belief was that ventro-fixation had a place in gynæcology, but that its sphere was a limited one; that Alexander's operation would never do much good, and that vagino-fixation would not attain any important position.

Dr. LEITH NAPIER wished to add a clinical detail to his previous remarks. The first case he operated upon had now become pregnant for the third time, and the uterus maintained its good position. He would like to ask Dr. Alexander whether he found it practicable to carry out his operation when the uterus was fixed posteriorly. It seemed to him that a complication might arise, referred to by Edebohls of New York, who on two or three occasions ruptured the round ligament in trying to draw up a fixed uterus. He believed that in France and in America Alexander's operation was now restricted to cases in which there were no adhesions, and that when these were present ventro-fixation was preferred. Dr. Duncan had dwelt on some important points in the *technique* of the operation of ventro-fixation; but for his own part he did not think so many sutures were required, he did not apply more than three. The only cases in which trouble had arisen during pregnancy following the operation, were cases in which there had been too dense adhesions; such a difficulty had not occurred in any case in which only three sutures had been employed. He also differed from Dr. Duncan as to the necessity of removing the tubes and ovaries when they were adherent, because these were just the cases where perfect health often followed the operation, and in one such case a patient of his had become pregnant.

Dr. HEYWOOD SMITH thought there was no necessity for so many sutures; in his first case he used only one suture

and it was quite successful. The discussion was interesting as showing the progress of public opinion. Twenty-two years ago he performed the first deliberate operation in England for ventro-fixation, and the *Lancet*, in commenting on the case, said that as it was the first they hoped it would be the last.

Dr. ALEXANDER, in answer to Dr. Napier's question, said that if the uterus could be put into position, with the sound or with the finger, it was his practice to operate, and he then put in a stem pessary. He did not consider that there was any danger in the stem pessary as he used it; he kept it in only while the patient was in bed. When there were adhesions he let the patient rest, and ordered douches and glycerine tampons, and after such treatment he generally found that the uterus could eventually be restored to its position.


The PRESIDENT said they must all feel greatly indebted to Professor Mayo Robson for coming up again on that evening, at considerable personal inconvenience, to join in the discussion. It had been a most interesting and instructive debate, and showed that the operation of ventro-fixation was not one to be put aside, but to be used with proper limitations.

Professor MAYO ROBSON, in reply, said he had been much gratified by the courtesy of his hearers and by the interest taken in the discussion. He thought the discussion had been useful; they had had an opportunity of stating their views and of expressing their differences; while it seemed to him that for the most part the differences could be reconciled, as they all seemed to agree on essential points. He had started by laying down four points, and he would frame his reply on the same lines. (1) As to safety. If these operations were not safe, they should not be done; and the discussion had shown that they were safe, except for the small risk that attended all operations. From this point of view he regarded Alexander's operation as quite safe; he had never heard of any bad results from it. (2) Necessity.

He could not help feeling, in looking back at the discussion, that one operator, Dr. Edge, seemed to operate a good deal more often than some of them would think advisable, for he had performed vagino-fixation, for instance, in twenty cases within a short time. It was, of course, a matter in which the individual judgment of the operator must guide him; but for his own part he had only found it necessary to do under twenty cases in the last ten years, whilst he thought that the majority of cases could be relieved by less severe measures. He felt strongly that when they could cure a patient without operation they should do so. (3) Efficiency. All were agreed as to the immediate efficiency of these operations, and their ultimate efficiency was shown by the evidence of Drs. Napier, Alexander, Taylor, Duncan and others. There had been a large number of cases in which the patient had become pregnant, and the trouble had not returned, and these could certainly be regarded as cured; whilst their previous condition was one of incapacity for their social and marital relations, and for their daily work. There were other cases, for instance, hernia, where life was not in danger, but the patient had much inconvenience, and there they did not hesitate to advise radical cure; and if they allowed the patient to judge for herself, and she chose to run the small risk for the possibility of cure, then he thought they were justified in operating. (4) Complications. Dr. Duncan had pointed out that the prevention of ventral hernia lay in their own hands, namely, by suturing the abdominal wall layer by layer, by keeping the patient resting long enough, and by fitting her with a proper pad. Years ago, when he followed the method of Sir Spencer Wells of suturing in one layer, he saw several cases of hernia, but since he had sutured in three layers it was a thing of the past. He had no wish to disparage Alexander's operation, and he was glad that Dr. Alexander was present to give them his results. No doubt the operation was better done, and the results consequently better, in the hands of the man who had introduced it, and who had

performed it several hundred times ; but he still thought the scope of the operation was very limited, especially when there were adhesions, for it was difficult to believe that the extensive adhesions they often met with could be removed by means of glycerine tampons. But by opening the abdomen and separating the adhesions they could be got rid of, and a conservative operation could thus be done. If the ovaries were unhealthy or damaged they should be removed, but otherwise he thought they ought to be left, as the woman was not then unsexed. If one was damaged he thought that one alone should be removed ; for though Dr. Duncan related a case in which this was followed by extra-uterine gestation, this must be quite an exceptional case. He felt that if they could save one or both appendages they ought to do so ; in this respect he was getting more and more conservative. He agreed with Dr. Duncan in objecting to the stem pessary, he had long ago given up using it.

He agreed with Dr. Alexander's pathology of prolapse rather than with Dr. Bantock's. If the fundus were well forward the intestines fell into Douglas' pouch and helped to keep the uterus anteverted. He did not agree with Dr. Elder as to the difficulty in finding the round ligament, but if any difficulty were experienced it was a simple matter to divide the aponeurosis of the external oblique, as was always done by Kocher of Berne, and the round ligament was then found at once.



ORIGINAL COMMUNICATIONS.

ON THE VALUE OF RECTAL EXPLORATION AS AN AID
TO DIAGNOSIS IN DISEASES OF CHILDREN.¹

By GEORGE CARPENTER, M.D.Lond.

*Senior Physician to Out-Patients, Evelina Hospital for Sick Children,
London.*

THE great importance of a rectal exploration, aided by bimanual palpation, in the elucidation of difficult cases of disease occurring in childhood, is not sufficiently recognised by the medical profession, and it is my hope that, after a perusal of this paper with its varied experiences, I may have the satisfaction of bringing into greater prominence this method of clinically interrogating disease.

Some years ago, when Registrar at the Evelina Hospital, I was taken by a surgical colleague to administer an anæsthetic for him to a little girl at Lewisham, who had suffered from constipation for a considerable period, which had been unrelieved by drugs. The family doctor, to whom great credit is due, was not satisfied with firing off all the drugs in and out of the pharmacopœia—and their name is legion—at the unfortunate patient, and then leaving her to Nature, as I think would have been her fate in the hands of a less competent man, but proceeded to make a rectal examination. This determination to use the hands and brain that Nature had provided him with, rather than the concoctions of exploiting chemists, was rewarded by the discovery of a

¹ Paper read before the East Sussex Medico-Chirurgical Society on May 19, 1896.

myeloid sarcoma growing from the anterior surface of the sacrum. I rest content with briefly calling attention to the case because it formed a strong impression on my mind, and was, no doubt, the inducement which led me to practise this mode of examination almost as a matter of routine, and hence, indirectly, is answerable for this communication.

It will prove of greater interest if I relate briefly cases illustrating the value of this procedure, and will be preferable to a long account unrelieved by clinical pictures.

A small boy, aged 3 years nearly, was brought to the out-patient department with an umbilical fistula. A casual inspection of the abdomen did not reveal anything of note, as there was neither swelling nor alteration in the appearance of the abdominal walls. A probe passed into the fistula and then into a sinus for some little distance, and there perhaps the matter might have ended; but careful palpation of the abdominal cavity revealed the fact that the mesenteric glands were about the size of a tangerine orange; the tumour was nodular. At this time it appeared as if these glands were in some way connected with the umbilical fistula—at least this was a possible solution. There did not seem, as far as an examination through the abdominal wall was concerned, to be any evidence of peritonitis, or connection between these glands and the abdominal wall, nor did the use of the probe yield any great assistance in connecting these clinical features, which are not very infrequently found associated in *tabes mesenterica*; but in this case it might have very plausibly been considered as due to difficulties in passing a probe along a tortuous sinus, and therefore not invalidating such a conclusion. An examination by the rectum shed quite a fresh light upon the case, and revealed an interesting condition, as well as at once solving the diagnosis and explaining the difficulty encountered in proving the supposed relationship between the umbilical fistula and the tuberculous abdominal glands.

Per rectum, a lump about the size of a small pea was found in the position of the prostate, and extending from

it there was a slight enlargement of the seminal vesicles on either side. The probe could now be passed down to the pea-like enlargement, and ended there. Evidently a tubercular abscess, originating in this prostatic enlargement, had burrowed along the urachus, and thus found its way to the surface by the umbilicus. The testicles were quite normal. Apart from the abnormality related, the pelvic contents were quite normal, and there was no evidence of peritonitis. Passing from the fistula to the mesenteric glands, there seemed to be a cord about the diameter of a lead pencil, but oval in shape ; by bimanual palpation the tumour felt hard and glandular.

The child was fairly nourished, had a subnormal temperature, and did not suffer from diarrhoea. Without such a rectal examination it would have been quite impossible to have located the cause of the umbilical trouble, and it is more than possible that the tubercular enlargement of the mesenteric glands would have been considered a sufficiently satisfactory explanation. And this naturally leads me to the discussion of tubercular peritonitis, and to give an account of the help that may be expected in the diagnosis of somewhat doubtful cases by the use of digital rectal examinations, assisted by bi-manual palpitation. I think most medical men of experience will agree with me in the statement that they not infrequently are brought face to face with cases where it is most difficult to decide whether the patient is suffering from tubercular peritonitis, or whether the condition is due to chronic gastro-intestinal catarrh associated with intestines full of flatus, from loss of intestinal muscular tone, the whole being accompanied by considerable abdominal distension and rigidity of the abdominal walls. How frequently such cases are brought by anxious mothers for "consumptive bowels," and they may really have this complaint in the medical sense, and how often the doctor would not like to stake his professional reputation on his ability to diagnose such a case ; and he may well hesitate and feel at sea, when confronted by the struggling little mass

of humanity, whose abdomen he is expected to pass a learned opinion upon. Without an anæsthetic it would perhaps be impossible to feel below those wind-distended abdominal walls, and without a rectal examination it would, not infrequently, be impossible to say that there was an absence of peritonitis; for it is not in every case—unaided by a rectal examination—especially in the early stages, that lumpiness, from matted intestines, can be readily detected, even with the aid of an anæsthetic. It is in such cases as these that we may often receive invaluable assistance from a combined rectal and abdominal examination, and if we desire to arrive at the truth without further delay, or decline to wait, Micawber-like, for “something to turn up,” such an examination should be made there and then. In such a case as I have sketched I should not feel satisfied until I had made a rectal examination, and what I should expect to learn by such a procedure I will now detail.

Rectal examinations as an aid to abdominal diagnosis are naturally of greatest assistance in young children, say from birth to 4 or 5 years of age, because it is possible to explore in them a considerable area of the abdominal cavity outside the pelvis, and this is especially the case when they are placed under an anæsthetic, though the latter may not be absolutely necessary.

With the patient's legs well drawn up so that the thighs are flexed on the abdomen, and with the pelvis raised on a cushion, the left hand of the examiner on the abdomen and the right index finger in the rectum the right side of the abdominal cavity can be explored; and by reversing the hands the left side up to the level of the umbilicus—the distance reached depending on the length of the index finger and the size of the patient—and sometimes a little above this level can be manipulated with ease between the two hands, and the condition of the intestines as well as the glands, apart from any abnormalities found within the pelvis, determined. If in such a case as I have supposed—and the type is not an uncommon

one—the finger in the rectum and those on the abdominal wall are separated by the thickness of the abdominal wall alone, (the intervening layer of normal intestine can be considered a negligible quantity for it cannot be gauged), then in such a case the question of peritonitis can be dismissed from the mind, however external appearances were in favour of such a view. If, however, there is an appreciable quantity of material between the examining fingers, other than that of the abdominal wall, then I say the peritoneal coat of the intestine is thickened by lymph, and we have a totally different condition of affairs to engage the attention. By bimanual palpation not only can intestinal matting—usually, though wrongly, considered glandular implication—be detected with greater ease than through the abdominal wall alone, but a peritonitis without definite abdominal lumps, or a thin plaque of omental thickening, perhaps coarsely granular, should not escape the clinician. Of course, it is perhaps hardly necessary to remark that glandular implication will be readily detected at this time, and that the pelvic contents will receive attention, and that a partially filled bladder will not be considered as evidence of a peritonitic exudation; but I do not hesitate to call attention to this latter, because I have seen students whom I have taught my methods fall into this error, and therefore I suppose it is one that has to be guarded against. Conversely a localised collection of pus or other fluid may simulate a distended bladder, but the passage of a catheter will quickly settle the difficulty. Then again fæcal lumps might suggest glandular implication or intestinal matting. Here an enema, or the fact that these masses are readily indented or broken by the examining finger will prevent a mistake being made. There is yet another point that deserves attention, and that is that intestines affected with peritonitis tend to move *en masse* when pressed upon, and do not quickly yield to the fingers when so treated as in health. Occasionally small empty and contracted coils of intestine do yield a sensation to the examining finger in

the rectum something akin to intestinal thickening from inflammatory causes, but when such have been felt once or twice such a mistake is not so likely to occur, especially if such a condition is remembered. To my feeling they are something like the sensation experienced on manipulation of the empty colon through the abdominal wall—rather broadly cord-like, I should express it—and they yield the sensation of contracted empty intestine, as I have more than once found to be the correct interpretation at the autopsy. Not only, then, may a rectal examination give valuable positive information in a doubtful abdominal case, but it may throw a totally different light upon a case of abdominal disease, which was supposed to admit of but one interpretation to the merest tyro in medical matters. I here have a case in my mind which I was enabled to diagnose successfully, solely owing to the fact that I had made a rectal examination. In January, 1889, a child was brought to my out-patients' department suffering from whooping cough, and examination of the lungs revealed the fact that this was complicated by broncho-pneumonia, but in addition, there was an abdominal tumour, which at the first blush suggested tubercular peritonitis. The child's age was 2 years. Following my custom in abdominal cases I made a rectal examination, and I was rewarded by being able to map out a horse-shoe kidney by bimanual manipulation, the anatomical relations of which I made careful notes of at the time. I sent the child into the wards with this diagnosis attached, but my views were not received with the sympathy they merited, and the fact that I could so readily overlook so obvious a case of tubercular peritonitis was a subject of wonder, at least to the residents, for I had only just been promoted to the full staff, and was, therefore, perhaps more open to criticism. However, fortunately or unfortunately, as the case may be, the child died and the absolute correctness of my notes was verified at the *post-mortem*.

This diagnosis was no mere guess, a lucky shot, but was founded on a scientific basis; and it incontestibly proves

the value of the method I am now discussing. The diagnosis in this case, viz., that of tubercular peritonitis practically made the prognosis fatal ; for if that were correct the patient was suffering from acute tuberculosis, and as we all recognise, there is only one termination to that—the cemetery. On the other hand, the recognition of a horse-shoe kidney did not imply tuberculosis of the lungs, and had the broncho-pneumonia from which the patient was suffering been less severe, there was nothing to prevent recovery, or at any rate the holding out of such hope to its parents, which could hardly have been the case in the face of the first alternative. Had the child recovered it is perhaps interesting to speculate as to how long he would have suffered from Scott's ointment, and as to what effect this would have had on the tumour.

Before leaving the subject of tubercular peritonitis, I propose to briefly relate a few illustrative cases, and I may add that it is advisable to remember that malignant disease, and in the young sarcoma more especially, may produce abdominal lumps which sometimes can readily be detected *per rectum* alone, or by bimanual palpation, though their correct interpretation may not prove by any means an easy matter in the wards, and that intussusception of the small intestine, or of the small intestine into the large, may likewise prove a stumbling block. It must also not be forgotten that simple inflammatory diseases of the peritoneum may simulate tubercular or other lesions by the formation of abdominal lumps.

A boy, aged nearly 2 years, was brought to the Evelina Hospital for swelling of the stomach, wasting, and constipation. The abdominal swelling had been noticed three weeks, and varied from time to time, but he had been ailing some time previously to this. The intestinal rumblings were very distressing ; he could not sleep, and passed scarcely any urine. The bowels were confined for three or four days, and then acted loosely. He was found to be a fairly-nourished, irritable, and rachitic child with an enlarged abdomen,

which measured $23\frac{1}{2}$ inches at the umbilicus, and $24\frac{1}{2}$ inches at the widest part. It was distended, tympanitic, and the abdominal veins were large. *Per rectum*, there was doubtful lumpiness in the right iliac region, and over the last lumbar vertebra two enlarged mesenteric glands were detected. A few days later, there was no doubt about the lump in the right iliac region, the abdominal distension having decreased. In the hypogastric region a cord-like mass, of about the diameter of a cedar pencil, was detected over the site of the urachus. *Per rectum* a very distinct mass, slightly irregular in outline, was found situated just above the last lumbar vertebra; and between the examining finger and the abdominal wall several inches of hard tumour were felt. A week later lumpiness was detected to the left of the umbilicus. Latterly he had suffered from frequent abdominal pains, and the motions had been loose and dark green in colour. The child died soon after, and a necropsy was made which verified the diagnosis of tubercular peritonitis. The tumours were due to matted intestine.

A female, aged 10 years, under the care of Dr. Nicholls, of Croydon, for some days was thought by him to be suffering from typhoid, so like were the symptoms to that disease. After watching the case for some days, he considered that there was an element of doubt about it, and summoned me for a consultation. When we examined her we found her much emaciated, apathetic, and with an abdominal expression. The tongue was moist but furred, and aphthous patches were seen in the mouth. The temperature was 99° F. The heart's apex was displaced upward and inward just below and to the right of the nipple. The left side of the chest gave evidence of fluid in the pleural cavity, reaching as far as the angle of the scapula behind and the nipple in front, and which merged into abdominal dulness. In the right flank there was resonance, but in the left this was not nearly so marked; elsewhere dulness prevailed. A well-marked fluid thrill could be transmitted from the abdominal to the pleural

cavity and *vice versâ*, but this was absent in the extreme flanks. Change of posture did not alter the physical signs. *Per rectum* no lumps were felt and the iliac fossæ were free. Bimanual palpation, however, revealed a deeply placed fluctuating tumour between the finger in the rectum and those on the abdominal wall. The urine was drawn off; the localised collection of fluid still remained. Later, on operation, 30 ozs. of pus were evacuated. There was a localised collection of pus in the left chest to the extent of 11 ozs. At her death, which occurred two or three weeks afterwards from general tuberculosis, no communication was found between the abdominal and pleural cavities. The abdominal abscess-cavity was completely shut off, a thick wall extending into the true pelvis, and upward and to the left as high as the umbilicus, in front of the intestines. The pus from the abdominal abscess was stained for tubercle bacilli, but none were discovered.

This case illustrates the condition of tubercular abdominal abscess, but it must not be forgotten that abdominal abscesses, other than tubercular, occasionally arise, sometimes starting from the vermiform appendix, rarely from an antecedent pneumonia, or following typhoid fever, or of unknown parentage; but it is not necessary to pass all such causes in review.

A boy of five years was brought to my out-patients' department at the Evelina hospital on account of an enlarged stomach of six weeks' duration, and considerable looseness of the bowels. The abdomen measured $27\frac{1}{4}$ in. at the umbilicus, it was distended but resonant, the umbilicus protruberant but not reddened, and dilated blue veins coursed over it. He was emaciated, the extremities thin, the trunk with but little subcutaneous fat, and the face thin and hollow-eyed with a faint flush on the cheeks. He was examined *per rectum* without an anæsthetic, but with negative results owing possibly to the extreme distension. In three weeks' time the abdomen measured a trifle over 20 in., the umbilicus was natural and it was

resonant, with the exception of the hypogastric region. A rectal examination was made, and the tip of the examining finger reached to within an inch or so of the umbilicus. In addition to the thickness of the abdominal wall quite an inch of tissue separated the fingers of either hand to right and left of the hypogastric area. By abdominal palpation alone, and after this examination, the abdomen here felt a little lumpy, perhaps. Nearly two months from the time of his first attendance the bladder was found full up to the umbilicus, and when evacuated the abdominal condition was as follows: The abdomen below the umbilicus was dull to percussion and the abdominal contents had a tendency to move *en masse*. Fourteen months from the time of his first appearance he was quite well as judged by absence of physical signs and his appearance.

A child of four years was brought to the Evelina hospital because of bronchitis and jaundice of six weeks' duration following an attack of measles. She was anæmic and did not complain of any pain. The abdomen was easily manipulable, but there was an irregular tumour in the right side occupying the inguinal region chiefly, but invading the neighbouring hypogastric, umbilical and lumbar regions to a small extent. The rectum was loaded with fæces, but when the bowel had been cleared by an enema it was possible to find a few glands at the upper extremity of the finger the size of lemon pips. An anæsthetic was then administered and a hard grape-like mass, opposite the umbilicus, was found stretching to the right iliac fossa and disappearing high up into the abdomen beyond the reach of the finger. Other portions of the abdomen were healthy. The uterus and its appendages were normal. She attended for a year nearly and was then lost sight of. Whilst under treatment she greatly improved.

This case illustrates a not at all common variety of abdominal tuberculosis, viz., tubercular implication of the mesenteric glands without other complications.

An infant of four months who had cranio-tabes and snuffles, and whose mother gave a history of a series of miscarriages and the birth of snuffling children, was brought for a swollen abdomen. He had been fed on cow's milk. The abdomen was much enlarged, the abdominal veins were obvious, and it was painful to the touch. Nothing of moment was felt through the abdominal walls, but *per rectum* there was decided thickening of the abdominal contents, though no obvious lumps. He died, and at the autopsy the case appeared to be one of chronic peritonitis, the intestines could be stripped of their false membrane leaving a shiny surface; the glands were not enlarged, nor was there any intestinal ulceration. When this material came to be examined microscopically it was found to be tubercular and crowded with tubercle bacilli.

This case illustrates a very uncommon form of tubercular peritonitis indeed.

On the several occasions on which I have been able to feel the bowel *per rectum* in intussusception, the invaginated portion has imparted the sensation of the os uteri advanced in pregnancy. Although this is, when felt, diagnostic of intussusception, it has never yet proved of value to me in differentiating between tubercular peritonitis and that disorder, nevertheless it must not be forgotten that tubercular peritonitis, when it attacks the omentum, which it not infrequently does, often forms a sausage-like tumour, passing transversely across the abdomen above the level of the umbilicus, and just such a tumour may be found in intussusception when the small bowel invaginates the large.

Further, the sausage-like tumour of intussusception may prove as like as possible to that found in tubercular peritonitis, and in certain instances there may be an absence of peristaltic contraction in it; blood stained mucus or blood in quantity may not appear; indeed, rarely this passage of blood may occur in tubercular peritonitis, and the fæces may be passed formed. To complete the picture and make the similarity more striking, there may be an absence of

symptoms of obstruction, a relaxed abdomen and a facial expression by no means indicative of so serious a lesion.

In such a case as this, if the bowel was sufficiently low to admit of digital inspection, the discovery of such a condition as I have related as occurring in intussusception would prove of invaluable assistance in forming a diagnosis.

The next subject I propose to briefly deal with will be the female pelvic organs. The sacrum in children is almost straight and so is the rectum, the direction of the bowel being probably influenced by that of the bone. The infantile bladder is egg-shaped with the larger end downwards, and as the pelvis is shallow it is almost entirely an abdominal organ, but as soon as the child begins to walk the bladder sinks more into the pelvis though even then its attachments are so loose that it readily rises wholly into the abdominal cavity when distended or otherwise displaced, a feature observed until puberty is near at hand. The uterus in the child is almost entirely made up of cervix, there being very little body, and it lies in the upper part of the pelvis. At birth the ovaries have descended as far as the brim of the true pelvis, but in children a few weeks old they are found close to the external iliac arteries at the side of the pelvis.

I have found, however, the uterus and appendages well above the brim of the pelvis on making a rectal examination in a child seven months old. Here is a sketch of the uterus, tubes and ovaries of a child aged two years and four months that I made *ad naturam*, which shows the relative positions. Another sketch gives the exact size of these organs when removed from the body. It will be seen that the uterus is about 1 in. long and $\frac{1}{2}$ in. broad at the fundus, the tubes about $1\frac{3}{4}$ in., the right ovary $\frac{5}{8}$ in. in length, and the left $\frac{1}{2}$ in. in length, and each about $\frac{1}{6}$ in. in diameter. The ovaries vary in size from $1\frac{5}{8}$ in. long by $\frac{1}{4}$ in. broad in a child a few weeks old, to organs measuring $1\frac{1}{2}$ in. by $\frac{1}{2}$ in. in a child approaching puberty. Intermediate sizes are found according to the age of the child, but ovaries show some variation in size in children of similar ages. The organs are for the

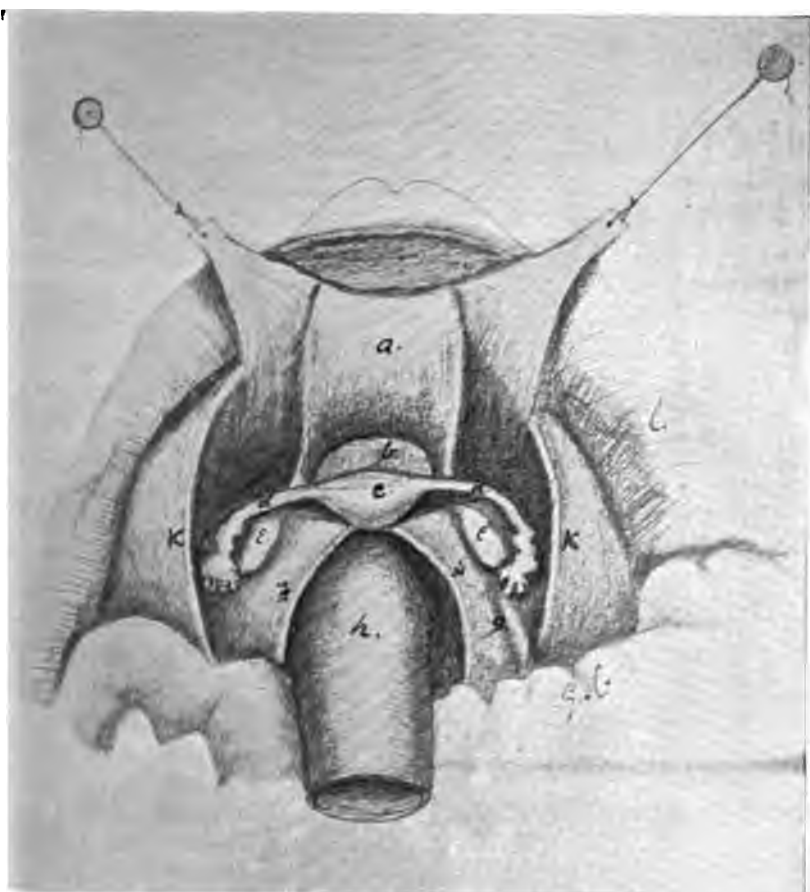


FIG. 1.

Pelvic Organs of a Female Child, æt. 2 years 4 months.—(a) bladder. (b) vagina. (c) uterus. (d) fallopian tubes. (e) ovaries. (f) falciform or utero-sacral ligaments. (g) right ureter. (h) rectum. (k) brim of pelvis. (l) reflected abdominal wall.

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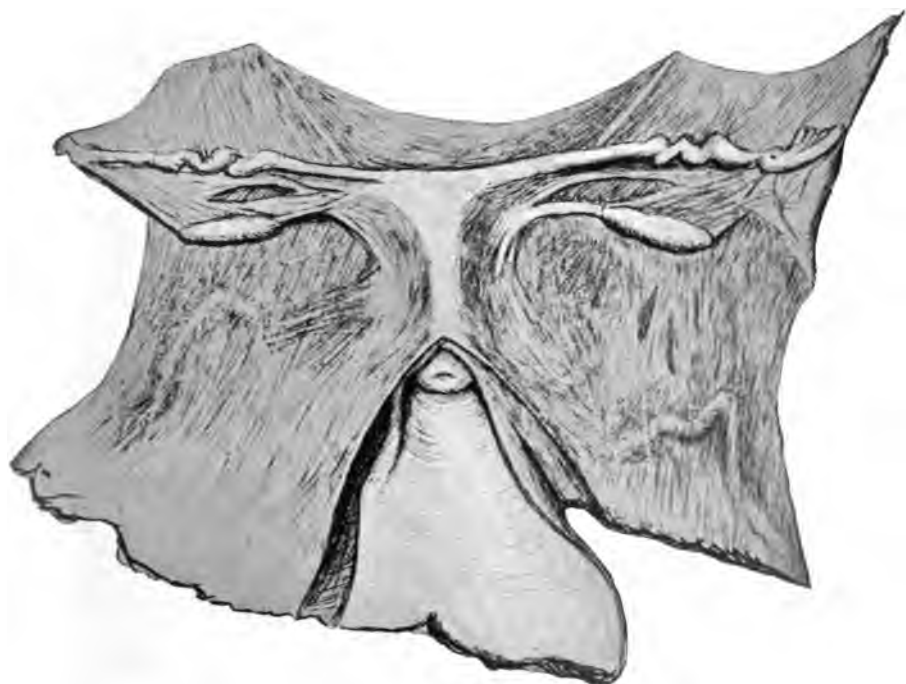


FIG. 2.

Genital Organs removed from a Female Child, æt. 2 years 4 months. Vagina opened behind, showing the external os uteri. The edges of the falciform ligament and its cervical attachment are shown. The ureters are dimly outlined on either side. The round ligaments are ill-developed.

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most part elongated oval in shape, but organs that are more or less round are occasionally found, and one ovary is not infrequently decidedly larger than its fellow. The Fallopian tubes, roughly estimating their diameter for clinical purposes, are about equal to the Vas at a similar age at their narrowest part, but they gradually enlarge as they pass along to the fimbriated extremity; in length they vary from a little over 1 in. to a little over 3 in., according to the age of the patient. The important anatomical guide to these structures when making a rectal examination is the falciform ligament. This falciform ligament, or the utero-sacral ligament, if that term be preferred, forms a sickle-shaped curve surrounding the rectum, attached behind to the sacrum and in front to the lower part of the cervix. This is very well seen in both drawings (figs. 1 and 2), and when the finger has passed some little distance up the rectum its sharp edge is readily found and is unmistakable. Using this structure as a guide the tubes and ovaries which, as the drawing (fig. 1), shows, are on a higher plane, can be readily manipulated between the exploring finger and the bony wall of the pelvis, or bimanually, and whilst these structures are being examined the ureters, the right being shown in the drawing as it crosses the pelvis and disappears under the corresponding tube and ovary, can be examined.

It is sometimes possible to detect in the ovaries the small cysts or dropsical graafian follicles which are not infrequently found *post-mortem*. The uterus, being a freely movable body, is not easily detected in this way, and readily eludes the finger which pushes that organ before it, but by a bimanual examination any marked abnormality could be easily appreciated, if the bladder be emptied. In young children the uterus can be rolled between the finger and the symphysis pubis and its contour made out with ease.

Displacements of the ovaries and tubes into the inguinal and crural openings sometimes occur. The youngest ovariectomy on record is by Chiene,¹ of Edinburgh, in a

¹ *Edin. Med. Journ.*, 1884, p. 1132.

child of three months. A swelling in the inguinal region suddenly occurred, and when various measures had been adopted for its relief the infant was operated upon. The contents of the sac were the ovary and Fallopian tube. A rectal examination was not made, but if it had been a fresh light might have been shed on the case.

Tuberculous disease of the Fallopian tubes, the uterus, or the ovaries is extremely rare in children; and so rare is it that I think I could count on the fingers of one hand the number of cases I have seen diseased in this way, both in the dead house and, what I have supposed to be tuberculous, in practice. The pathological specimens in museums are few and far between. In the Guy's Hospital museum there are but two specimens, one, 2251¹⁰ (Dr. Bright 1829), aged 11 years, who died of "strumous inflammation of the brain" and lung tubercle; another older specimen still, 2251, of a child with tortuous tubes distended with cheesy matter. Chaffey¹ published a case in a child of 4 years, whose tubes were caseous and the upper part of the uterus was caseous; she died of general tuberculosis. Silcock² also records a case in a child of 5 years of age, who had tubercular salpingitis, endometritis and a tubercular deposit in the body of the uterus the size of a walnut; she also died of general tuberculosis. Mr. Arthur Cheate,³ when Registrar at the Evelina Hospital, found in the *post-mortem* room in a child of 21 months, tubes filled with pus, the left being in communication with an abscess cavity holding one drachm. This case also died of general tuberculosis. Here is a drawing which I copied from Mr. Cheate's sketch (fig. 3). About the same time Dr. T. G. Stevens, then Resident Medical Officer at the Evelina Hospital, also found another specimen in a child 9 years of age, who suffered from tubercular peritonitis and died of general tuberculosis. The tubes in this

¹ *Path. Soc. Trans.*, vol. 36, p. 303, 1885.

² *Path. Soc. Trans.*, vol. 36, p. 303, 1885.

³ *Lancet*, 1891, p. 1098.

case had been invaded from their fimbriated extremities and the tubercles were caseous at the outer end, but caseation ceased towards their uterine extremities. Microscopical sections showed a system of giant cells, epithelioid cells, and lymphoid cells; a very few scattered tubercle bacilli were found. Fig. 4, the accompanying drawing, executed by Dr. Stevens, depicts the condition. In a girl of 4 years, who succumbed to tubercular brain tumours, together with tubercular intestinal ulceration, I found both ovaries matted to their respective tubes, the extremities of which showed cavities containing caseating material. I diagnosed tuberculosis of the tubes during life. In another girl aged 16 months, there were tubercles in the uterus; elsewhere they were found in the meninges, the peritoneum, the liver, the spleen and the kidneys. In a girl aged 7 years, who attended my out-patients' department some six or seven years ago and who looked exceedingly ill, I found an enlargement of the uterus, the right tube being the size of a lead pencil; there was a lump, possibly tubercular, the size of a pigeon's egg, just above the top of the sacrum. Unfortunately, I soon lost sight of her, but had I possessed my present knowledge at that time I do not think I should have rested content with the mere record of this fact in my notes and the exhibition of tonics.

A girl of 7 years of age came to the Evelina Hospital suffering from tubercular peritonitis of the ascitic variety. I found the ovaries and uterus normal, but from the top of the latter a rounded tumour arose the thickness of the index finger of about three inches in length, which, passing upwards in the abdominal cavity, was there lost. Two years after this the tumour had shrunk to the size of a lead pencil; she was in good health and remains so to this day, and this is ten years since her illness commenced.

Inflammatory diseases of the tubes and ovaries have hitherto received little if any attention, and the subject has been neglected. Dr. Sānger, of Leipsic,¹ records a case of

¹ "Keating's Cyclopædia of the Diseases of Children," vol. iii., p. 739.

a little girl who, contracting gonorrhœa, developed all the symptoms of an acute pelvic peritonitis, from which she eventually recovered after a protracted illness.

Marx¹ calls attention to the fact that salpingo-oöphoritis sometimes complicates vulvo-vaginitis in infants with symptoms similar to those found in the adult. He supports this statement by referring to the *post-mortem* examination of fifteen children who had symptoms of this complication, and in five of these the Fallopian tubes contained pus, and their uterine attachments were sealed. He thinks that these infantile inflammations are apt to commence afresh at puberty, and often are the real cause of pelvic inflammations of newly wedded women, hitherto frequently credited to the husband.

I am uncertain whether to place the following case under this heading, because there was no history of vulvitis; the microscopical evidence was not in favour of tubercle. The child, whose age was 22 months, was the subject of congenital syphilis. It had not been healthy from birth, and its abdomen had always been noticed rather swollen, though of late this latter was a more noticeable feature. Twelve months previously it had an attack of measles, and within the last four months it was attending as an out-patient for a period of two months, but there was no record of the cause for this attendance. In the right inguinal region a tumour was detected the size of a French walnut, which did not feel fixed even through the abdominal wall. A rectal examination brought further light to bear upon the nature of the illness. The uterus was normal. Attached to its upper part by a short cord-like attachment was the tumour, and on the posterior surface of this tumour was a convoluted tube, or what felt like one. The tumour was freely movable and could be carried over to the mid line of the body though not beyond it; fluctuation was detected in it by bi-manual manipulation. The ovary on the opposite side was natural, but on the affected side it could not be found. The child

¹ *Gazette de Gynécologie*, November 15, 1895.

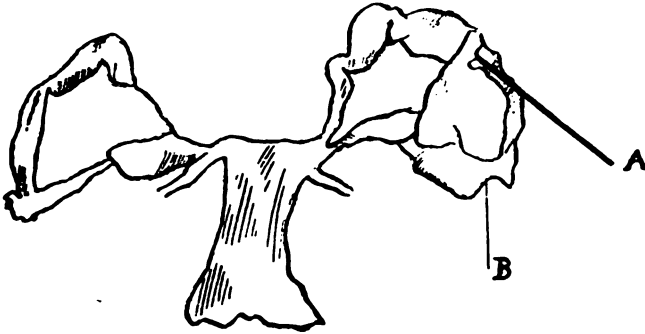


FIG. 3.

Specimen dissected (Child, æt. 19-12 years).—(a) Probe passed into Fallopian tube. (b) Abscess wall laid open.

(Copied from Cheatle's drawing.)



FIG. 5.

Small Ovarian Cyst with thickened Fallopian tube attached, along which a bristle has been passed. The fimbriated extremity of the fallopian tube is shown.

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FIG. 4.

Tubercular Fallopian Tubes, from a Child, æt. 9 years.

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had Parrot's nodes, the free edge of the spleen extended four fingers in front of the costal margin, and the liver projected three fingers below the costal margin in the nipple line; there were signs of bronchitis in the chest. The impression I first formed was that I had to deal with a case of pyo-salpinx or possibly tubo-ovarian disease, probably tubercular, and I thought it probable that the child had general tuberculosis. Careful watching for some days dismissed the idea of general tuberculosis from my mind, and my colleague, Mr. Eve, operated on the child with a perfectly successful result. The patient, on recovery, was sent to a convalescent home. The tumour contained foul-smelling pus; it was slightly adherent to the rectum, the cæcum and the bladder (fig. 5). On carefully examining the portion removed, Mr. Eve and myself came to the conclusion, after some consideration, that it was an ovarian cyst burrowing down between the layers of the broad ligament and probably somewhat tilted forward, so that the Fallopian tube which was enlarged and curly could be felt behind and above. The cyst measured $1\frac{3}{4}$ in. by $1\frac{1}{2}$ in. I have only given a short account of this case to illustrate my paper; Mr. Eve will shortly publish it in full elsewhere.

I think this condition could hardly have been diagnosed without a rectal examination and bimanual palpation, and I think it probable that it might have been passed into some other group, failing coming to the Hospital, as a case of suppurative peritonitis, a fate which it barely escaped.

A rectal examination and bimanual palpation in Marx's cases would have proved of great interest, and now that he has called attention to this dangerous complication of vulvo-vaginitis, it certainly should be practised if the occasion demands it.

Before leaving this section I will briefly mention ovariectomy in children, and I have collected from literature 35 cases of those 12 years of age and under. In perusing these records, what has struck me most has been the extreme infrequency with which an attempt at a rectal examination has been made, and further I have but little

doubt that in some instances, if this method had been put in practice, the correct diagnosis would have been made at a very early stage. The youngest case on record of ovariectomy for an ovarian tumour is one of Roemer's, age $1\frac{3}{4}$ years, the result being successful. Of these cases 15 were dermoids, 10 cystic, 6 sarcoma, 2 carcinoma, 1 malignant tumour, 1 cylinder epithelioma, and 1 fibro-myoma. In 1 case of cystic disease both ovaries were involved, and both ovaries were attacked with sarcoma in another. Amongst these there were 6 deaths, and in 1 case the disease recurred two years later with a fatal result. I once discovered the left ovary enlarged in a child of $3\frac{1}{2}$ years, who had sarcomatous infiltration of both kidneys, together with abdominal deposits amongst other areas of attachment.

I have found a case of carcino-sarcoma of the uterus in a child aged 2 years, reported by Rosenstein, and a case of carcinoma of the uterus reported by Ganghofner in a child of 8 years. Of sarcoma of the vagina in children under 12 years I have found some twenty cases recorded. Vaginal sarcoma is usually seen as multiple polypi, sessile or pedunculated, of a firm consistence, or even gelatinous. These polypi do not usually ulcerate, nor are the lymphatic glands, inguinal or lumbar, affected as a rule, and the course of the disease is chronic, the result fatal. The uterus or bladder may be invaded by the growth and present polypoid excrescences, the recto-vaginal or vesico-vaginal septa, the connective tissue at either side of the vagina, or the broad ligaments may be attacked. The rectum is not so readily involved. Extirpation when no great extent of tissue has been invaded has proved successful. Ligature of the polypi and scraping of the vaginal mucous membrane appears to have been worse than useless, recurrence following these measures very quickly, and valuable time has been lost thereby.

As yet I have not been successful in detecting during life syphilitic implication of the ovaries, although I have on

many occasions sought for this condition in syphilitic infants.

This paper has already outstepped the limits I had originally intended. The mere mention of other well-known diseases will serve to show the additional amount of information to be gained by a rectal examination. Take pelvic abscesses, tuberculous ureters, impaction of renal calculi in the ureters, the condition of the ureters in hydro- and pyonephrosis, hydatids, congenital mesenteric and other cysts, the bony pelvic walls in disease, the condition of the bladder and its contents in various disorders, rectal polypi, and so on. It must not be forgotten that as a rare occurrence multiple rectal polypi may be associated with malignant disease. The pelvic contents should, therefore, be thoroughly explored, so that any induration of the tissues may be detected at the time of examination. Should any exist all ideas as to the innocence of these growths should be at once dispelled, and a timely discovery such as this may prove of service from a surgical point of view. The detection of infiltration would outweigh microscopic evidence pointing to the non-malignancy of the tumours in question.

In conclusion, I can promise to those who will practise rectal examinations much valuable information, which could not otherwise be obtained in certain abdominal diseases; and as time progresses I hope that much additional knowledge in the future, other than *post-mortem*, may be added to the diseases of the female pelvic viscera in children by other workers in this direction.

CASES OF OVARIOTOMY.

No.	Author	Year	Age	Site	Pathology	Recurrence	Death
1	Alcock	1871	850	...	...	...	Death.
2	Barker, in Cupples	...	...	...	...	...	Cure.
3	Barlow & Marsh	1871	...	...	...	...	...
4	Bianchi	1878	175	...	...	...	...
5	Bigelow	1891	41	...	...	...	...
6	Black	1882	...	...	...	...	Death.
7	Chenoweth	1892	611	...	...	...	Cure.
8	Continental — name not given	1882	625	...	...	...	...
9	Croon	1873	280	...	...	...	...
10	Croon	1888-9	1013	obs.	...	...	...
11	Cupples	1893	689	...	...	...	...
12	Duchamp	1874	...	...	...	...	...
13	Griffiths	1876	750	...	...	...	...
14	Hamaker	1889	vol. ii.	...	...	...	...
15	Heinicrius	1889	29	...	...	...	...
16	Hooks	1886	1022	...	...	...	...
17	Kolloek	1891	722	...	...	...	Death.
18	Krukenberg	1888	855	...	...	...	Cure.
19	Laheideff	1889	196	...	...	...	Recovery.
20	Lucas	1890	224	...	...	...	...
21	Mackenzie	1888	302	...	...	...	Cure.
22	M'Crar	1877	...	...	...	...	...
23	Malins	1890	1174	...	...	...	...
24	Mears	1870-72	vol. i., 45	...	...	...	Death.
25	Neville	1880	246	...	...	...	Cure.
26	Omori & Ikeda	1892	1009	...	...	...	Recovery.
27	Parke	1888	761	...	...	...	Recurrence 2 years later. Death.
28	Pease	"Ovarian Tumours," p. 59	...	...	...	...	Unrecorded.
29	Polebnoff	1887	373	...	...	...	Cure.

30—Roemer	...	<i>Deut. Med. Woch.</i> , 1883, 762	...	1½ years	...	Dermoid	...	Cure.
31—Schwartz	...	<i>Arch. f. Gynäk.</i> , 1878, 475	...	4 "	...	Cystic, colloid	...	Cure.
32—Thornton	...	<i>Brit. Med. Journ.</i> , 1881, 933	...	7 "	...	Dermoid	...	Cure.
33—Wagner	...	<i>Arch. f. Kl. Chir.</i> , 1884, 504	...	10 "	...	Sarcoma, round cell...	...	Recovery.
34—Wegscheider	...	<i>Beiträge zur Geburtshilfe und Gynäkologie</i> , Band i., 1872, 35	...	12 "	...	Epithelioma, cylinder	...	Death.
35—Wells	...	<i>Brit. Med. Journ.</i> , 1874, 342	...	8 "	...	Dermoid	...	Cure.
SARCOMA OF THE VAGINA.								
1—Abelfeld	...	<i>Archiv. f. Heilkunde</i> , Bd. xvi., p. 135, 1867...	...	3½ years	...	Vaginal polypi, fibro-sarcoma filling pelvis, inguinal glands enlarged.	...	
2—Billroth	...	<i>Wiener Klin. Woch.</i> , 1889, No. 8, p. 159...	...	18 months	...	Warty growths, vagina and bladder, vesico-vaginal septum infiltrated.	...	Fibro-sarcoma.
3—Denme	...	Pick quotes in <i>Arch. f. Gynäk.</i> , vol. xvi., p. 218	...	5½ "	...	Vaginal polypi.	...	Fibro-sarcoma.
4—Hauser	...	<i>Virchow's Archiv.</i> , Band lxxxviii., p. 168...	...	6 months	...	Vaginal tumours (multiple), round and spindle cells and striped muscle fibres.	...	
5—Heckford	...	<i>Trans. Obstet. Soc.</i> , vol. x., p. 224, 1868...	...	2 "	...	Vaginal and vulval villous tumour.	...	"Medullary."
6—Körner	...	Pick quotes in <i>Arch. f. Gynäk.</i> , Band xvi., p. 220, 1894	...	2 years	...	Vaginal polypi, vesico-vaginal septum infiltrated.	...	Fibro-sarcoma.
7—Marsh	...	<i>Trans. Path. Soc.</i> , vol. xxv., p. 178, 1874...	...	2 "	...	Polypi vagina and bladder.	...	Vesico-vaginal septum infiltrated. Small round celled sarcoma.
8—Marshall	...	<i>Brit. Med. Journ.</i> , vol. i., p. 127, 1889	...	2½ "	...	Vagina	...	
9—Pick	...	<i>Archiv. f. Gynäk.</i> , Bd. xvi., p. 192, 1894...	...	2 years	...	Vagina infiltrating pelvic organs.	...	Spindle-celled sarcoma.
10—Power	...	<i>St. Bartholomew's Hosp. Reports</i> , vol. xxxi., p. 121-135; <i>Path. Soc. Trans.</i> , vol. xlvii.	...	2½ "	...	Vaginal polypi, connective tissue right side of vagina.	...	Fibro-sarcoma and myxo-sarcoma.
11—Sänger	...	<i>Arch. f. Gynäk.</i> , Band xvi., p. 58	...	2½ "	...	Polypoid masses in vagina-bladder.	...	Broad ligaments, deep lumbar glands infiltrated. Round celled sarcoma.
12—Schuchardt	...	<i>Verhandl. der Deutsch. Gesellschaft. f. Gynäk.</i> , Band ii., p. 239, 1888	...	7 months	...	Vaginal tumour.	...	Mixed celled sarcoma.

SARCOMA OF THE VAGINA—continued.

13—Ditto ...	...	Ditto ...	...	...	...	2½ years	...	Vaginal polypi.	Mixed celled sarcoma.
14—Schulstler	...	<i>Wiener Klin. Woch.</i> , pp. 148-225, 1888	...	...	...	4 years	...	Vaginal polypi.	Vestico-vaginal septum. Myxo-sarcoma.
15—Soltmann	...	<i>Jahrb. f. Kinderheil</i> , Band xvi., p. 418	...	...	...	2½ "	...	Vaginal and bladder polypi.	Round celled vagina, spindle celled bladder.
16—Smith (T. C.)...	...	<i>Amer. Journ. of Obstet.</i> , vol. xvi., pp. 555 & 668, 1883; <i>ibid.</i> , vol. xvii., p. 577, 1893	...	...	...	3½ "	...	Vaginal and uterine polypi.	Uterine sub-peritoneal growths. Myxo-sarcoma.
17—Steinthal	...	<i>Virchow's Archiv.</i> , Band cxi., p. 449	...	...	...	2 "	...	Vaginal tumour.	Myxo-sarcoma.
18—Thomas	...	<i>Amer. Journ. of Obstet.</i> , vol. vii., p. 51	...	...	...	18 months	...	Tumour of left labium majus.	Sarcoma.
19—Weinlechner	...	<i>Wiener Klin. Woch.</i> , p. 109, 1889	...	...	...	18 "	...	Vaginal polypi, involving bladder (cystitis), cervix (pyo-metra), urethra.	Myo-fibro-sarcoma.
20—Ditto ...	...	Ditto, p. 130	...	...	...	1 year	...	Vaginal polypi.	

MALIGNANT DISEASE OF THE UTERUS.

S. Roenastein	...	<i>Virchow's Archiv</i>	...	...	...	2 years	...	Carcino-sarcoma of uterus, size of walnut.	Death in 14 days.
Ganghofner	...	<i>Zeitschrift f. Heilkunde</i> , 9, 1888, 337	...	8	Suppression of urine (brought for Carcinoma of uterus. Tumour size 20 kreut-zer piece. Uterus 2.6 c.m. long	Death. Vagiola.

ON THE USE OF ANÆSTHESIA IN OBSTETRIC PRACTICE.

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"But there is

No danger in what show of sleep it makes,

More than the locking up of spirits for a time,

To be more fresh reviving."—*Cymbeline*, Act I., sc. vi.

PART I.

History—The First Case—Use of Charcoal Fumes in India—Arguments for Anæsthesia—Foreign Opinion—Use of Pain—Deaths from Prolonged Labour—Pathological Anæsthesia—Adoption of Simpson's Discovery—Opposition on Religious Grounds—Witty Reply—The Queen's Eighth Labour—Chloroform the Fashion.

"WHILE making my researches," wrote Dr. James Young Simpson, Professor of Midwifery in the University of Edinburgh, in October, 1848, "I further attempted to ascertain if any writer had proposed to assuage or annul by any means the pains attendant upon human parturition; I failed, however, to find any traces whatever either of any practical attempts to abrogate or modify, by true anæsthetic means, the pains of labour, or of any theoretical suggestions even as to the very possibility of effecting that desirable result."¹

Lucid as a scientific record should be, he states in the next few lines that he himself administered sulphuric ether to a patient in labour on January 19, 1847, in the course of his own private practice in Edinburgh, and believed this to

be the first instance of the purposeful induction of anæsthesia in midwifery known to the medical profession. We yield full homage to his genius and acknowledge the magnitude of the debt we owe him for his bold advance into this new field of work. Since that day it has come to light that "the natives of India have from time immemorial had a custom of subjecting the parturient woman while she lies upon the ground to the stupefying fumes of charcoal and the smoke of wood fires, which fill the apartment and produce an anæsthetic influence less complete but less dangerous than that caused by chloroform or ether."³

Dr. Tyler Smith, President of the Obstetrical Society of London, when he heard this in 1860 from Dr. J. Jackson, remarked that "this fact was one of the greatest interest, as it was also found that when gravid women died from the inhalation or retention of carbonic acid gas the child was apt to be violently expelled." It appears to us that this communication rather enhances than discounts the value of Simpson's statement, as by the manner of its reception the fact was evidently before unknown to English men of science.

What, we ask ourselves, was the motive which led Simpson to his first experiment? Are not the pains of labour physiological? This indeed is true, but their character and duration are such that writers and physicians of all times and every nation testify to their extreme severity. No doubt also the fact that "among the upper classes intolerably acute suffering is often attended with little effect,"³ had not escaped the eye of this great clinician.

Professor Nœgele, of Vienna, said, "the severity of the pains is very much increased by the continually increasing distension of the external parts, the patient's features alter so much that they can scarcely be recognised, her impatience rises to a maximum with loud crying and wailing, everything in fact denotes the violent manner in which both body and mind are affected."⁴

Velpeau remarked upon "ces cris perçants, cette agitation

si vive, ces efforts excessifs, ces angoisses inexprimables, ces douleurs qui paraissaient intolérables" ⁵ when referring to the expulsive stage of labour. Hieronymus said 350 years ago, "Mulier in partu maximos et fere intolérabiles sustinet dolores." ⁶

But another objection arises; this pain is a constant concomitant of uterine contraction, does it not therefore answer some useful purpose? Undoubtedly it is a danger signal, it warns the mother of her condition, and bids her call for aid; but pain is *per se*, destructive and in excess, ultimately fatal in its action and effects; "it exhausts the principle of life," said Mr. Travers. ⁷

"Mere pain *can* destroy life," said Dr. Gooch; ⁸ in fact, the maternal mortality attendant upon parturition regularly increases in proportion to the increased duration of the woman's sufferings, for in the Rotunda Lying-in Hospital before anæsthesia was known, there was a mortality of 1 in 320 mothers whose labour lasted from 2 to 6 hours, but where it endured from 7 to 12 hours 1 in 80 died; where it lasted from 12 to 24 hours 1 in 26 died; prolonged from 24 to 36 hours 1 in 17 died; and when their sufferings were not relieved within 36 hours, 1 in every 6 of the women perished. ⁹

Simpson recollected, and subsequent cases have verified the knowledge, that labours sometimes take place without pain, yet in all other respects perfect in their mechanism. We refer to rare instances of paraplegia, to others during alcoholic intoxication, to some in the coma of puerperal convulsions, rarer still in a few lax multiparæ during sleep, and in animals after fracture of the cervical vertebræ, ¹⁰ in which labour has proceeded to its complete termination without feeling or sometimes even knowledge on the mother's part.

A month before the first induction of anæsthesia in labour, ether had been administered in London for the first time in surgical work on December 19, 1846, at the house of Dr. Boot in Gower Street. It had in the meanwhile been

adopted by the profession, and Simpson could therefore gain an eager audience at the Edinburgh Obstetrical Society when he communicated to them, on January 20, 1847, the fact that he had tried ether inhalation in labour in a case of deformed pelvis, and found that "though the physical sufferings of the patient could be annulled by its employment, yet the muscular contractions of the uterus were not necessarily interfered with." The Society readily took up the suggestion and many members tried it in their practice, giving ether to the full surgical degree, but this was soon found to be unnecessary.

On March 28 Dr. Protheroe Smith, of London, first used ether in labour, publishing an account of his case in the *Lancet* for May 1; forthwith it was employed for this purpose in France, Germany, America, and Ireland in respective order, and its success thereby clearly established. Intemperate and absurd attacks were made upon Dr. Simpson for this innovation, especially by the clergy, and even by some members of the medical profession, who averred that it was "unnatural" and contrary to the laws of Christianity to mitigate the pains of labour. His reply to these opponents is a masterpiece of learning and logic.¹¹ He could not refrain from a few witticisms at their expense. "These same individuals," he said, "strangely forget that they themselves do not think it 'unnatural' to assist and supplement other physiological functions of the body. They wear clothes to assist the protecting influence of the skin, and do not think that 'unnatural.' They use cookery and condiments to aid the functions of mastication and digestion; is this because they think these functions imperfect in their formation and mechanism. They constantly ride in coaches; is the function of progression imperfect in man?"

In November of the same year (1847) Dr. Simpson discovered the anæsthetic properties of chloroform. The step to its adoption in midwifery was easy, and it began to supplant ether on account of its more pleasant smell, its portability and ease in application.

On April 7, 1853, James Clark, physician to the Queen, administered chloroform to her Majesty in her eighth confinement. Twelve days after he wrote to one of his colleagues : "Its action was marvellous ; not for a single moment was she given a dose strong enough to make her lose consciousness. Her Majesty was enchanted ; never has she recovered more quickly before." ¹²

Many English ladies followed the example of the first lady in the land, and anæsthesia became as much a fashion as a necessity among the upper classes in their confinements.

PART II.

Analgesia the Ideal Condition in Labour—Views of the French author Dastre—Possibility of Analgesia with Chloroform and Ether—Is the Fœtus affected by the Anæsthetic ?—Relative Safety of Ether in Surgery—Reasons for Immunity of the Parturient under Chloroform.

The very fact that this paper is devoted to the study of Obstetric Anæsthesia, if I may so name it, presupposes that there is some difference between this form of artificial sleep and the ordinary narcosis of surgical practice. The truth of this premise is clear when we consider for a moment the requirements which obtain in normal labour. Pain is to be abolished, while the uterine muscular contractions which cause the pain are to continue as before. While in surgical operations unconsciousness is a desideratum, in labour we hope to retain the patient's will power and control of voluntary muscular effort if such a state can be attained.

I will translate a few interesting remarks which the French writer, Dastre, has made upon this point : "It was the muscular effort of the mother which the Romans believed in when they thought there were certain male deities called *Di Nixi*, whose active assistance they used to pray for in childbirth, under the supervision of *Lucina*.

"Accoucheurs who employ chloroform desire only to obtain a general relief or *indolorité*. Is this analgesia a possibility? We frequently find cases more or less approaching to it in which the loss of sensibility to pain is accompanied by suppression of one of the special senses or by simple dulling of the intellect, consciousness, or will-power. Of the two necessary constituents in perfect analgesia—(1) abrogation of pain, and (2) preservation of all which is not pain—we will regard only the first element as really essential. The difficulty is to discover if chloroform or ether, properly managed, can suppress painful sensation without extinguishing consciousness and will-power; certain surgeons and accoucheurs say it is enough if the anæsthetic be very *gradually* administered."

He also remarks: "It is not so easy with the ordinary processes of giving chloroform to produce this analgesia, but rather by procedures more refined and better husbanded, and of this number is the combined method of giving opium with chloroform which we study too little; thanks to it one can make a very instructive analysis of nervous functions."¹³

I propose to consider the results obtained by the different *anæsthetic* drugs in the later pages of this article, and would at this time merely suggest that with chloroform or ether alone we *can* satisfy those requirements which have above been indicated. Dr. Frederic Hewitt, referring to the *first stage* of ether and chloroform anæsthesia, definitely states that "a state of analgesia is reached in which the patient, though more or less conscious of his surroundings, will not experience pain from the infliction of an injury. A tooth might, for example, be painlessly extracted during this stage, the patient being all the while aware of the operation."¹⁴

Before passing to the indications for administration, let us turn for a moment to the child and determine whether the foetus is in any way endangered or impaired by the entrance of anæsthetic drugs into the maternal circulation. This question is one of the highest interest to the pathologist, for those delicate endothelial layers of the placental villi which

bathe in the maternal blood, would seem at first glance to offer no resistance to the passage of such substances into the foetal plasma and corpuscles.

Dr. Gillet, of New York, expressed his firm belief that morphia and other narcotics might affect the foetus when given to the parturient mother, and produce a relative condition of narcotism in the new born infant. He related many illustrative cases, also two in which atropine having been exhibited to the mother, one foetus was born with widely dilated pupils and other signs of the presence of the drug.¹⁶

Mr. Lawson Tait, in a letter to the *British Medical Journal*, wrote: "In operating upon a case of extra-uterine foetation where the child was living, we found it profoundly narcotised and its breath smelt strongly of ether for some hours. Simpson long ago pointed out the curious fact that whilst chloroform does not affect the foetus by passing from the maternal circulation, ether does."¹⁸

Dr. Watts Eden, whose researches on the development of the placenta are well known, is of opinion in regard to this case, that there would be no difference between the intra- and extra-uterine situations of the placenta, as far as chemical exchanges in the blood are concerned. Ahlfeld states: "It is known that normally chloroform and carbonic oxide pass over from the maternal blood to the child;"¹⁷ he does not, however, support this by any facts.

Lawson Tait's case was *deeply* anæsthetised for a *surgical* operation, and Ahlfeld's opinion with regard to chloroform, though I find it also quoted in Parvin's "Science and Art of Obstetrics," 1895, is quite unsupported by other writers.

On the other hand, Dr. Mundé, of New York, in speaking of his twenty-five years' experience of chloroform in labour, had never observed any effects to be produced upon the child;¹⁸ and Cazeaux says: "le nouveau né offre son aspect ordinaire, ses cris ne sont ni moins forts ni moins prompts à se faire entendre et sa viabilité ne paraît nullement compromise."¹⁹

Many authorities do not even refer to this point, and those others who do so, with the above exceptions, agree with Mundé and Cazeaux, and exonerate the anæsthetic from causing damage to the child.

I believe the weight of evidence alone would carry the verdict. "It is not proved that obstetric anæsthesia produces a deleterious effect upon the fœtus."

Let us now inquire what risk to life is entailed by the exhibition of an anæsthetic for *surgical* procedures, massing together the statistics upon which it would be safe to lay some stress, and with a resulting aggregate of 2,154,210 recorded administrations, I find that 794,141 ether cases caused 48 deaths, or 1 in 16,544 inhalations; that in 1,360,069 chloroform cases there were 432 deaths, or 1 in 3,148 inhalations; mixtures of chloroform and ether yielded about 1 death in 5,550 administrations, and bichloride of methylene about 1 in 5,000.

In Europe, therefore, although for *surgical* operations chloroform has a mortality from cardiac and respiratory paralysis five times greater than that of ether,²⁰ its use is not attended with the same risk in obstetric practice. Firstly, because chloroform is never so fatal in women; ²¹ secondly, there is a marked cardiac ventricular hypertrophy during pregnancy; ²² thirdly, all *reflexes* are stronger in women, the heart muscle responds more readily to stimuli and is less easily paralysed than in men; ²³ fourthly, there is a high abdominal pressure (preventing undue vaso-motor dilatation) due to the presence of the pregnant uterus; ²⁴ fifthly, an anæsthesia deeper than the second degree of narcosis is rarely needed; ²⁵ sixthly, safety is considerably insured by the recumbent posture during the administration in labour; ²⁶ again, immunity from risk is largely aided by the absence of fear on the patient's part; many surgical cases have died of syncope during the first few whiffs of chloroform,²⁷ these fatalities being due, not to poisoning, but to their alarm at the ensuing operation. On the other hand the parturient mother welcomes it as lending her a sweet forgetfulness of

toil and pain. Once more, the involuntary expulsive efforts seldom entirely cease, and as at the expiration of each of these comparatively deep inspirations follow, these may tend to prevent asphyxia.²⁸

Statements of this kind will bear a value only proportionate to their practical results, and these are so good that many authors aver that they are not aware of *any* deaths resulting from the deliberate and skilful use of chloroform in labour.²⁹ Sansom referred to three in 1863, but gave no account of them. Snow recorded one in his work,³⁰ but in that case the patient administered the anæsthetic to herself, and no medical man was present at the time.

The writer's present intention is to avoid any unfounded or dogmatic statements; but when an overwhelming consensus of opinion is heaped into one scale of the balance, there need scarcely be a minute specification of its individual elements; let us, therefore, plainly say that the force and frequency of uterine contraction is not often materially affected by anæsthesia of the second degree; though the pains may be sometimes slowed, they are, on the other hand, often rendered more regular and less liable to inhibition by mental stimuli in nervous women, and that also if this degree be not exceeded the uterus will not relax and after-hæmorrhage will not ensue. When pushed to the third degree of narcotic sleep the complete muscular relaxation then yielded by the inhalation will, however, require some extra, though temporary, precautions against hæmorrhage.

These considerations apply also to the other anæsthetic agents of which we shall treat; and though there are modifications due to the slightly differing physiological actions of ether, methylene, mixtures of ether and chloroform, bromide of ethyl, nitrous oxide gas, nitrous oxide gas with oxygen, and chloroform preceded by opium or morphia, yet the cardinal principle which associates complete uterine relaxation and consequent danger of hæmorrhage with the deepest stages of narcosis, holds good with every vapour on the list.

(To be continued.)

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CLINICAL CASES.

A RARELY RECOGNISED COMPLICATION IN THE CONVALESCENCE FROM AN ABDOMINAL SECTION.

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THE object of this short communication is to record the notes of a complication retarding the convalescence of a case of abdominal section which at first seemed very hard to explain, but which is perhaps more frequent than is generally suspected.

On May 7, 1894, Mrs. N., who was sent to me by Dr. Rygate, of Cambridge, had the right appendages removed on account of severe suffering in that side. The affected ovary was the size of an average hen's egg, and as at the time of the operation the left ovary appeared healthy, it was left undisturbed. After a perfectly uneventful convalescence the patient returned to her home, and this first operation was so far successful that she has never had a recurrence of pain in the right side. She had not been long back at her work, however, before she began to suffer from pains in the left side, which became increasingly severe till she was once more incapacitated for her duties. At this stage I saw her, and found the left ovary enlarged to about the size of a small hen's egg and prolapsed, in fact, the exact counterpart of the condition as it had affected the other ovary a year previously. Some weeks of treatment gave no satisfactory result either in restoring the patient to health or in diminishing the size of the swelling, so that on July 22, 1895, the abdomen was re-opened about half an inch to the

left of the old scar. The operation itself presented no difficulties worthy of remark. After the operation the vomiting and retching were very persistent, so that on the following morning she was ordered a large cup of tea, which had the effect of washing out the stomach, and thereafter the retching ceased. Until the fourth day there was nothing particular to note as the temperature never exceeded 99.6° , though the pulse kept between 80 and 90° ; on this day, however, she had a choking sensation and complained of a bad taste in her mouth. The next day, July 27, the morning temperature was 100° , and the patient complained of some pain across the lower part of the chest. There was absolutely nothing in the abdomen to suggest an explanation for the rise of temperature; there was no undue distension, as from the third day flatus had been passed freely from the bowel; the period which commenced on the third day after the operation ceased on this the sixth day. At first one thought that the odour in the breath might arise from eructations of foul gas from the stomach, or that it might be due to a dental plate which the patient was unable to remove from her mouth owing to its clasps having eroded the necks of the supporting teeth. Mr. Messenger kindly saw her and took out the plate, but the offensive odour still continued. On the 31st she coughed a little, and it is to be noted that whenever she turned on to her right side she had a choking sensation and the bad smell, which was very perceptible also to any one standing near the bed. It then occurred to me that the patient might have something lodged about the laryngeal pouches from material vomited after the operation, and this opinion seemed confirmed by the induction of a choking attack from external manipulation of the larynx. This was the first occasion on which I personally had had an opportunity of noticing the smell; it most closely resembled the foetor observed in severe cases of bronchiectasis.

On August 1 her temperature was 102° , and the pulse 104. Dr. Tilley kindly saw her on the evening of this day

and again on the following morning, but examination of the larynx gave negative results. The lungs were then very carefully gone over, and just above the right nipple some very curious sounds were perceived; sometimes they were like very harsh leathery friction, sometimes coarse rhonchus, and sometimes all abnormal character disappeared. There was no tubular breathing or other evidence of consolidation.

On the following morning, *i.e.*, August 3, there was for the first time some expectoration, and on the evening of this day some blood was coughed up, not a teaspoonful altogether, and mucus of a most foetid character. Unfortunately this was thrown away by accident before a microscopical examination could be made. From this time on everything was straightforward, and by August 12 the temperature had become slightly subnormal, the pulse 84, and the respiration 18; she still had a little cough, but no expectoration and no bad taste. The auscultatory signs had disappeared. It should have been noted that the highest respiratory rate recorded was 26 per minute. In a note sent by the patient on November 11, she says that when she coughs she occasionally has some pain at the seat of the trouble in the chest, but on the whole the account she gives of herself is very favourable.

The particular interest of this case seems to centre in the possibility that many of the so-called instances of septic pneumonia after operation may arise in this fashion, and to suggest that probably it would in most cases be best, as soon as a patient is sufficiently conscious after operation, to give a full drink of warm tea or other simple fluid for the purpose of promoting the rapid emptying of the stomach, for even where patients have been prepared for operation with all reasonable care as concerns abstinence from food, I have certainly seen very curious material rejected from the stomach shortly afterwards. It might possibly be best before every abdominal operation as a routine practice to wash out the stomach, which after all is a very simple procedure.

NOTES OF THREE CASES OF TOTAL HYSTERECTOMY.

By MRS. SCHARLIEB, M.D., B.S.LOND.

Senior Surgeon, New Hospital for Women.

MRS. B., aged 45, has had four children and three miscarriages; the seventh pregnancy ended in miscarriage of triplets five years ago.

Two months before admission she was suddenly seized with violent abdominal pain, and from that time was confined to bed. This attack occurred on the third day of a period and was attributed by her to excessive fatigue and chill in consequence of standing all day at the wash tub. On admission she complained of swelling in the abdomen, severe abdominal pains, increased frequency of micturition, and continual but not excessive hæmorrhage. Temperature 100°, pulse 88. On examination the abdomen was tender in the umbilical and iliac regions; a hard mass was felt in the lower central region; the sound entered about four inches.

Diagnosis.—Soft unnodular myoma pressing on bladder.

Operation, July 6, 1894.—A median incision from below umbilicus to pubes revealed a mass which appeared to be the myomatous uterus. There were many tough adhesions which were broken down with some difficulty. A corkscrew was introduced into the mass, and an attempt was made at delivery; the corkscrew tore out; a further separation of adhesions showed that the bulk of the tumour was behind the uterus, which was spread out on its anterior surface nearly as high as the umbilicus. On attempting to separate the posterior mass it was lacerated, and was then found to consist of about a quart of firmly clotted blood in a thick but friable capsule. As the uterus had been injured by the corkscrew, and also in the attempt to peel it off the hæmatoma, it was thought better to remove it. This was accomplished with difficulty, incisions being made before and behind into the vagina. The bladder was peeled off, and

the uterine arteries were ligatured and the appendages tied off at the outer attachment of the broad ligaments. The opening into the vagina was not closed, and a glass drainage tube passed from the abdominal cavity into the vagina, where it was supported by a mass of iodoform gauze.

The specimen consisted of the entire uterus and appendages, together with the sac which, when emptied of its contents, had a diameter of five inches. The sac was thought to be the result of extra-uterine gestation, but no direct evidence could be obtained. The patient left the hospital well on September 4.

Miss G., aged 43, complains of large tumour in abdomen which troubles her greatly and interferes with her work. It has been growing eight years; periods regular—not excessive, not painful; general health good.

The operation was easy; there were no adhesions. The whole mass, uterus and soft myoma, was removed, the vaginal roof was carefully closed and the peritoneum sewn together over it with Lembert's sutures. Patient was discharged well on 27th day.

E. J., aged 35, single, admitted complaining of excessive periods for eight years, of large and growing abdominal tumour, of disorders of micturition which is sometimes very frequent and sometimes impossible, also of rectal tenesmus and obstinate constipation.

On examination a hard nodular mass extends from the pelvis to the level of the umbilicus, it is hard, movable, elastic, non-fluctuant.

Per vaginam.—A hard smooth swelling fills the vagina and makes access to the os uteri difficult.

The operation was somewhat difficult at first owing to a mass of the tumour being imprisoned in the pelvis and difficult to dislodge; when this was released the operation was easy; there were no adhesions; the whole myomatous mass, which included the uterus, was removed, the vaginal roof was carefully closed, and the peritoneum sewn over it with Lembert's sutures. The patient made an uninterrupted recovery, and was discharged on the 25th day.

REPORTS OF SOCIETIES.

MEDICAL SOCIETY OF THE 9TH ARRONDISSEMENT, MEETINGS OF DECEMBER 12, 1895, FROM THE *Journal de Médecine de Paris*, Jan. 5, 1896, p. 7. VAGINAL HYSTERECTOMY, by Dr. R. PICHEVIN.

(Continued from vol. xi., p. 574.)

Müller (of Bâle) had long before observed that an antero-posterior median section of the uterus gave rise to no hæmorrhage, and that such vertical bisection of the uterus permitted hysterectomy to be performed rapidly and the broad ligaments to be secured with facility. This proposition of Müller did not, however, receive much attention. It is even doubtful if that surgeon ever made a systematic application of his method.

A method which evidently recalls that of Müller was brought out in opposition to Péan's operation by M. Doyen of Rheims. The commencement of the operation is identical with that of Péan's method just described, viz., a circular incision, separation of the bladder, opening of the posterior *cul-de-sac*; same details, same precautions to avoid wounding the bladder and the ureters.

As soon as the bladder has been separated somewhat beyond the level of the os internum, and a sufficient portion of the anterior surface of the uterus has been exposed, the anterior wall of the uterus is split open in the median line by means of scissors, one of the blades being introduced into the cervical canal and the other applied to the anterior surface of the uterus. The forceps placed on each side of the cervix at the beginning of the operation for pulling down the uterus are left in position.

Through the median section of the anterior uterine wall, the posterior surface of the cervical canal and of a portion of the uterine cavity can now be seen. The lip of one side of the vertical incision is seized firmly with a pair of Museux's forceps, the teeth penetrating in the cavity and biting on the anterior surface. Another pair of Museux's forceps is applied on the other lip at a point symmetrical with the latter. Traction is then exercised upon the latter two instruments so as to bring down the fundus uteri. The bladder is then detached higher up with the finger and the peritoneal *cul-de-sac* opened, if this has not been done before. A new portion of the anterior surface of the body of the uterus then appears under the speculum protecting the bladder.

The incision in the anterior wall of the uterus is then prolonged by means of scissors in the median line so as to approach the fundus. The uterus may now be felt to descend by exercising a little traction on the forceps. Another pair of Museux's forceps is now applied on one of the lips of the median incision as high as possible, and another on the other side. These last two pairs of forceps are left in place, whereas those previously applied, being in the way, are removed. Traction being exercised on the forceps left in position, the fundus uteri is easily brought down if the uterus is not enlarged or bound by adhesions.

If the lowering of the fundus offers considerable resistance, the same manoeuvres should be continued by dividing the uterus in the median line and applying other forceps above those already in position until the fundus uteri has been brought down into the vagina and outside the vulva; but if a large fibroma has to be dealt with, the tilting forwards of the uterus cannot be done so easily.

It then becomes necessary to resort to *morcellement*, which should be effected preferably upon the median line at the expense of the anterior surface, the rule consisting in hollowing out from the anterior surface around the median incision.

It is well understood, however, that in the case of large fibromas the *morcellement* is effected irregularly. Nevertheless, the sections and scooping out must be made on the anterior surface, and especially in the middle of that surface and away from the broad ligaments. After various efforts, more or less prolonged, the fundus uteri is brought down, and the uterus is entirely outside the vulva.

Until now, there has been no mention of compressing forceps or of long ones. There has yet been no hæmorrhage and therefore no necessity to arrest or control it. By further traction upon the uterus the broad ligament appears or is felt on one side of the uterus or the other.

A pair of long, powerful forceps is now introduced from above downwards so as to grasp firmly the broad ligament of one side in all its width. These forceps are applied close to the uterus, the end of the blades reaching somewhat beyond the inferior border of the broad ligament. A second pair, not so strong, but with blades of the same length, is also applied, similarly from above downwards, on the same ligament but outside of the stronger pair, so as to control the hæmorrhage in case the stronger forceps should slip after dividing the broad ligament. Both the strong forceps and the supplementary ones being firmly fixed, the tissues are divided between the former and the uterus.

The uterus is now free on one side, the other ligament can be more easily reached and the hæmorrhage controlled with greater facility. Another pair of forceps, like the stronger ones just mentioned, is now applied to the latter ligament in the same manner, directing the blades towards the perinæum and the handle upwards. Outside of these the supplementary forceps are also applied as was done on the other side. The remaining broad ligament is then divided between the uterus and the stronger or innermost forceps, and the uterus is removed.

The only thing to do now is to secure the tube and ovary on each side by means of forceps, if this has not already been done, by bringing them outside and securing

them with the long forceps previously applied to the broad ligament. This is done by introducing the forceps into the peritoneal cavity and tilting them, so as to cause the superior extremity of the blades to come away from the *fourchette* and to rise in the pelvic cavity, whilst the handle is brought down towards the perinæum. The broad ligament on each side obeys the same movement of tension, the base of the broad ligament having a tendency to acquire the superior position, and the higher portion of the same ligament to assume the inferior position. As is the case in Péan's method so in this, no ligature is used. If the hæmorrhage has been perfectly controlled all that is necessary is to introduce a dressing of iodoform gauze into the vagina and to press it up moderately into the pelvis. The characteristic feature of this process of hemisection is that the control of the hæmorrhage requires no attention until the uterus has been brought out at the vulva. There are no hæmostatic forceps in the way of the operator, no risk of slipping during the manœuvres necessary to bring down the uterus. The *morcellement* is median. The median section of the anterior uterine wall affords a firm hold for the forceps, thus facilitating greatly the lowering of the uterus; therefore the control of the hæmorrhage is consecutive, contrarily to what is the case in Péan's method.

M. Segond has combined the method of Doyen with that of Péan, and has thus created a mixed process consisting in the following steps: a circular incision around the cervix, which is, however, made near the os externum. From this circular incision two small vertical ones are made, one on each side of the cervix, forming an anterior and a posterior vaginal flap at the expense of the cervix. According to M. Baudron, great importance is attached by M. Segond to these two lateral incisions and the two flaps which they form, as a sure precaution against the risk of wounding the ureters. As in Péan's operation the bladder and the rectum are pressed upwards and separated, one or two pairs of long forceps are applied at the base of the broad ligaments on

each side, the broad ligaments are divided on the inner side of the forceps, the cervix is divided into two valves which are cut off from the body of the uterus and removed. Up to this point the method of Péan has been followed. The control of the hæmorrhage has been preventive and effected from below upwards. It is at this stage of the operation that M. Segond introduces the anterior median section which characterises the method of Doyen. He divides the anterior wall of the body of the uterus in the median line, applies Museux's forceps on each lip of the vertical incision, and by means of successive tractions brings down the fundus uteri as in Doyen's process. When the uterine body is brought out at the vulva, M. Segond controls the hæmorrhage of the remaining portion of the broad ligaments which is attached to the body of the uterus. Long forceps are applied successively from above downwards, until the blades meet those of the forceps previously applied from below upwards in the first part of the operation. The broad ligament is divided between the uterus and the forceps, and the other side is treated in the same manner. Upon the whole M. Segond removes the body of the uterus in the same way as M. Doyen removes the whole uterus. The uterine body divided in the median line is drawn down. The control of the hæmorrhage of the superior portion of the broad ligaments is consecutive; it is only effected after the fundus has been brought down. Therefore the first part of the operation consists in the preventive control of the hæmorrhage and in the first manœuvres of Péan's method, followed by the anterior median section, the bringing down of the fundus, and the consecutive control of hæmorrhage as in Doyen's process.

The method of M. Quenu is related to the process of Müller in that the former surgeon practises a vertical median section, not only of the anterior, but also of the posterior wall of the uterus. The median incisions are utilised for the application of forceps to draw down the uterus.

It is difficult to pronounce judgment on the relative

merits of the various processes of hysterectomy, nor is it easy to affirm the absolute superiority of one over the others. This would necessitate a review of the different affections which would justify hysterectomy and the consideration of that operation separately in each particular case.

For want of a sufficient knowledge of the operation of M. Quenu, the author could not say if the process is superior to that of M. Doyen.

The operation of M. Segond, he was sorry to say, appeared inferior to the process of Doyen or that of Péan.


If the fundus can be brought down, why not employ Doyen's process throughout? Why encumber the way of the operator with forceps which may tear the tissues and give rise to hæmorrhage? The advantage of the anterior vertical hemisection is that no attention to the control of hæmorrhage is necessary until the uterus has been brought out at the vulva. Moreover, the application of forceps from below upwards and from above downwards, as done in M. Segond's process, does not give a security so perfect in a hæmostatic point of view, as the application of those instruments according to Doyen's or Péan's methods.

It is evident that the handle of the forceps applied from above downwards will have a tendency to turn down and twist the broad ligament at the point where the blades of the last forceps applied from below upwards terminate, which may tear the tissues and produce hæmorrhage, although it is known that M. Segond practises his method with great skill. But the processes of Péan and of Doyen are sufficient to remove the uterus in all cases.

The indications for these two operations may be briefly stated as follows :—If the fundus uteri cannot be brought down into the vagina and outside the vulva, whether owing to a large fibroma or to firm adhesions, the operation of Péan should be adopted.

In a recent case the author had to deal with a uterus surrounded by a hard thick zone. Douglas' *cul-de-sac* was filled up with a hard resisting mass, the induration being

prolonged on each side, and the uterus was completely fixed. Péan's process was chosen without hesitation, which proved to be a good inspiration. A large portion was removed by *morcellement*, and although only a very small part of the fundus uteri remained, it was found impossible to bring it down, and the last forceps had to be applied deeply at finger's length and with little accuracy. The operation could never have been completed by the method of Doyen or that of Segond; therefore in all difficult cases when the uterus cannot be brought down, Péan's process is the one to be selected. On the other hand, if the uterus is free and easily lowered, if the lesions surrounding it are not extensive, if the body of the uterus is not too much enlarged, and the uterine cavity not too long, the operation of Doyen is to be preferred. The method of Doyen is therefore best suited to easy cases. A short time ago the author had an opportunity of examining a patient whose uterus was enlarged but not excessively so. On each side of the uterus were two masses of the size of the fist, not adherent to the pelvis and allowing a considerable mobility of the uterus. Hysterectomy was performed by Doyen's method and the uterus, with an abscess in its wall, was easily removed, as also two suppurating dermoid cysts of the ovary. Doyen's process was here clearly indicated. In a large number of cases it is possible to have recourse to hemisection of the anterior wall with advantage, even when the uterus is relatively large and adherent. However, if there is any doubt as to the possibility of bringing down the fundus uteri, there could be no objection to incising the anterior surface. If, notwithstanding *morcellement*, the uterus still resists all attempts to lower it, whether owing to a large size of a fibroma or to the degenerated condition of the uterine tissue giving way as in the case of cancer, it is easy to transform Doyen's operation into a mixed one. The lower portion of the broad ligament may then be secured with forceps and the preventive control of the hæmorrhage progressively continued from below upwards as in Péan's operation. In this way and under such



circumstances, the transformation of one process into another is both easy and useful.

In the most favourable cases vaginal hysterectomy should be performed as follows : After the uterus has been brought down and the cervico-uterine space carefully exposed with the help of a hysterometer, the posterior *cul-de-sac* is then dealt with. The transverse incision should be made far from the os externum and as high up as possible, so as to enter easily the peritoneal *cul-de-sac*. Scissors should be preferred to a knife for incising the vagina, as causing less tendency to hæmorrhage from the small vessels. This incision should be made freely. Then the anterior transverse incision should be made lower than the preceding, about five-eighths of an inch ($1\frac{1}{2}$ c.m.) from the os externum. The right extremity of the posterior incision and the right extremity of the anterior incision are joined by an oblique lateral incision, and the left extremities are joined in the same way. The other stages are those described by Doyen. But when the uterus has been brought out and the fundus is outside the vulva, is it right to apply only one pair of forceps on the whole of the broad ligament ? It is generally agreed that instead of one only, two pairs of forceps should be applied side by side on the whole width of each broad ligament. The author thinks that it is advisable to secure the broad ligaments from above downwards, not with one pair of long forceps, but with a series of shorter ones applied successively upon the broad ligament from its superior border to its inferior. Each part of the broad ligament is thus secured by powerful forceps, which have less tendency to slip. But when there is no suppuration, when the uterus is brought down with facility and the ligaments are easily accessible, the hæmorrhage, in the opinion of the author, should be controlled, not with forceps, but by means of ligatures, which are easily applied. Ligatures are preferable in well defined cases, because they lessen the danger of hæmorrhage, and the sequel of the operation is less painful. What is to be feared during and after the operation is the

hæmorrhage. In the course of the operation the hæmorrhage is perfectly controlled in the majority of cases, but afterwards hæmorrhage may supervene unexpectedly without any fault attributable to the surgeon.

The breaking of forceps a few hours after the operation may be the cause of a severe or even fatal hæmorrhage. The unlocking of forceps is sometimes followed by grave, if not fatal, consequences. Cases of this nature are exceptional, but hæmorrhage is more often observed when the forceps are removed, that is, about forty-eight hours after the operation. Such accidents may be followed by the death of the patient. Lastly, hæmorrhage has been observed later after the operation. The author has observed a case at the time the sloughs came away. It would not be advisable to darken this picture unnecessarily. Hæmorrhage is a possible accident, always to be feared, but on the whole rare enough when the number of hysterectomies and their consequences are taken into consideration. If, as in cases of fibroma or cancer, it is found easy to ligate the broad ligaments, the surgeon may apply silk or catgut ligatures along the uterus; but if the peri-uterine lesions are suppurative, if the uterus cannot be brought down, it will be necessary to resort to the use of the forceps. Thanks to these instruments, the field of hysterectomy has been greatly widened. The operation is more easy, it has even become possible in certain cases which were before considered above the resources of art. The bearing of this criticism should not be misunderstood. The treatment of the broad ligaments constitutes an indisputable progress in the *technique* of hysterectomy. The author has merely endeavoured to draw attention to some inconveniences, and to lay a modest claim for the application of the ligature which renders excellent service in certain restricted cases.

DISCUSSION.

M. ISCH-WALL considered that ligatures in general were preferable to forceps, which he had observed to produce sloughs and fistulæ at the bottom of the cicatrix.

M. MORAU related that during the performance of a difficult hysterectomy, he had turned to advantage the recollection of some researches he had formerly made at Clamart with Dr. Le Bec on the application of ligatures. He found this to be the only means which enabled him, in that case, to obstruct the bloodvessels and terminate the operation.

M. PICHEVIN thought that in reality the subject of post-operative hæmorrhage had not received sufficient attention. It was useful to make known the accidents which supervened after the performance of hysterectomy. At one time it might have been thought that these hæmorrhages were not to be apprehended, but experience had demonstrated that severe, sometimes fatal, hæmorrhage was to be feared in a number of cases which required to be determined.

M. NITOT observed that an indispensable precaution was to operate on a clean uterus at the moment it was to be incised, and with that object it was necessary to have recourse to a previous curetting.

M. PICHEVIN approved the principle of cleansing the cervico-uterine canal and of observing the best antiseptic precautions with regard to that cavity. He believed M. Quenu was the first who had insisted upon that point, which had its importance. Moreover, he thought it was desirable to differentiate the operation of Quenu from that of Doyen, as the latter could be modified by dividing the posterior wall of the uterus in the median line, when that organ was already outside the vulva. M. Quenu divided the uterus in the median line at the beginning of the operation. His hemisection was practised on both the anterior and the posterior walls, and he made use of this bi-parietal median section to lower the uterus and bring the fundus outside the vulva. Some surgeons performed the operation on the principle of Doyen and, at the moment of applying the forceps, that is after the appearance of the fundus uteri at the vulva, they completed the bi-section of the uterus, dividing into two parts the fundus and the posterior wall of

the uterus. He had himself several times operated in this manner, but this operative addition to the anterior median hemisection, should not be confounded with the operation of M. Quenu.

M. ISCH-WALL said it was very difficult to reduce hysterectomy to an absolute system. Every time that that operation was performed, a special process was decided upon according to a definite line of conduct traced beforehand; but some unexpected difficulty might arise which would cause another process to be adopted to continue the operation. On the whole the classical processes could be followed in easy cases, in others the surgeon had to do the best he could.

M. PICHEVIN admitted that, in difficult cases, the surgeon had to do the best he could, particularly when he had to deal with a large fibroma. But it should not be proclaimed that the operation, as irregular as it might be, was not performed according to general laws and precepts which enabled the surgeon to avoid wounding important organs and prevent serious hæmorrhage. It was useful to trace the general lines of different processes of vaginal hysterectomy, and that was what he had endeavoured to do. When the operator knew well the modifications which he was compelled and able to introduce into the performance of hysterectomy, he was at liberty and even obliged to do his best in difficult cases, but he would repeat that the apparent irregularity of the operation was in itself orderly and methodic.

P. Z. HEBERT, M.D.



*EDITORIAL.***ABDOMINAL HYSTERECTOMY WITH INTRA-PELVIC (INTRA-OR SUB-PERITONEAL) TREATMENT OF THE STUMP.**

THE subject of abdominal hysterectomy has occupied the attention of the British Gynæcological Society on several occasions within comparatively recent times. But, as in the sister Society of London, the Obstetrical Society, the intra-pelvic treatment of the pedicle formed the subject of a paper by Mr. Harrison Cripps, of St. Bartholomew's Hospital, which was read at the February meeting and discussed at the March meeting, it seems not unfitting that we should reconsider the question. Perhaps there is an additional justification for undertaking this task, inasmuch as the present writer four years ago exhibited at the London Obstetrical Society what he then believed to be (and the statement has never been contradicted) the first large fibroid tumour shown there, which had been operated upon in accordance with this method. Prior to this, intra-pelvic treatment of the hysterectomy stump had never come before the Obstetrical Society. Before this date, however, other Fellows of the Society, such as Heywood Smith, Milton of Cairo, and Reeves had practised this method, but had published their observations or shown their specimens elsewhere.

Before considering the present position let us turn back the pages of gynæcological history and see what records lead to the present. This is all the more necessary as it has become the fashion to speak and write of "Baer's method of intra-peritoneal hysterectomy," and credit is improperly

given to Dr. Baer, which he himself would probably be the first to repudiate as undeserved.

More than twenty years ago Freund advised abdominal hysterectomy for malignant uterine disease. As an outcome of this, Schröder in 1878 recommended and practised an intra-peritoneal method of abdominal hysterectomy for fibromyomata of the uterus. But even in the hands of Schröder himself the mortality of the intra-peritoneal method remained considerably higher than the older extra-peritoneal treatment of Hegar, Koeberle, Keith, Bantock, Thornton, Tait and others. In 1881 Bardenhauer, of Cologne, modified and improved Schröder's technique, so that he was able to report seven operations with six recoveries and one death. It is recorded that Keith practised the intra-peritoneal method in 1885, but never took to it as preferable to the extra-peritoneal plan. Various operators in Germany—notably Brennecke, Zweifel, Gusserow, Olshausen and Fritsch—employed the intra-peritoneal method in a proportion of their cases. In February, 1888, a new impetus was given to the operation by the efforts of Dr. Mary Dixon Jones to resuscitate Freund's operation. In January, 1889, Dr. L. A. Stimson, of New York, read a paper on ligation of the uterine arteries in their continuity, in relation to the removal of fibroids and the intra-pelvic treatment of the stump. This marks the greatest advance in the real surgical necessities of the operation. But in 1888 A. Martin, of Berlin, following Bardenhauer, had effected total, or practically total, extirpation of the uterus. It is not ascertained whether he originally deliberately ligated the uterine arteries as advocated by Stimson, or only secured any bleeding vessels which demanded attention. In 1888 various operators tried the intra-peritoneal method in isolated cases. Dr. Christian Fenger reported a case to the Chicago Gynæcological Society, which was, however, only a myomectomy, not a hysterectomy; the patient died three weeks after the operation. Cases of this nature are in no way comparable to removal of the uterus, when the whole organ, except a part

of the supra-vaginal cervix and the vaginal cervix, is amputated with the tumour. Even to-day operators improve their tables by erroneously including these simpler and safer operations with true hysterectomies.

Dr. Japp Sinclair in 1888, intending to secure hæmostasis by the *serre-nœud*, found the tumour to be a fibro-cystic one, enucleated it and brought the edges of the uterine flaps together and closed the abdomen, except that he left a drainage tube to ensure safety. He did not ligate the uterine arteries. In October, 1889, he operated again in a somewhat similar manner. Both patients recovered. In September, 1891, he had his third case. Dr. Sinclair's paper, read at the Gynæcological Society in 1893, records twelve cases with one death. It is fair to mention that the operator regarded this fatal case as due to sublimate poisoning.

Sinclair's method, while intra-peritoneal, is a myomotomy resembling in principle the procedure formerly practised by A. Martin, of Berlin. This is practically the old Schroeder operation with aseptic or antiseptic care, but with the addition of deep ligation of the broad ligaments, so that the ascending branches (not, as we understand it, the main trunks) of the uterine arteries are secured.

H. A. Reeves, in 1890, tied each uterine artery separately and treated the stump intra-peritoneally; it does not appear whether he carefully covered the stump, or left the peritoneal edges to fall over it as had formerly been done, and has since been repeated by various other operators, with success in some cases and fatality in others. Reeves' case recovered.

In February, 1892, Heywood Smith read a paper on "Sub-peritoneal Hysterectomy" in which he related that his first case so treated was in August, 1890. He recorded three cases; all recovered, but the patients did not attain convalescence easily.

Milton, of Cairo, in November, 1890, recorded three cases in the *Lancet*; his operation, like Heywood Smith's, included systematic ligation of the uterine arteries. In the same year several American operators—Goffe, Krug, Baldt, Dudley—had been operating in this manner.

Then in 1892, Polk, of New York, and Baer, of Philadelphia, read papers before the American Gynæcological Society which produced a great impression. Polk had seventeen cases with two deaths, Baer nine cases with no deaths. These operations were almost, if not quite, total extirpations. Polk explained that his operation was a modification of Stimson's. Baer cut off everything except the vaginal portion of the cervix; he did not stitch over the stump. His operation, if it in any way differs from that of Chrobak's operation, published fully two years before, only differs in that he did not disinfect the cervix.

It is also right to refer to the operation advocated by the late Widenham Maunsell, when Heywood Smith's paper was under discussion in 1892.¹ This is what he called the intra-peritoneal, deperitonised method, and closely resembles the operation of total extirpation now modified and performed by Bowreman Jessett. Other operators in London, including Treves, Jessett, Pearce Gould and the writer, adopted the intra-peritoneal method in isolated cases in 1892; and in February, 1896, Mr. Cripps has, as we have said, brought forward eight cases which were operated on between. Of these eight cases, seven recovered and one died. It appeared to the writer, on listening to the short notes of the cases, that one case was a simple myomotomy, as the pedicle of the tumour was ligatured right round and the uterine tissue did not seem to have been touched. Another case made a somewhat stormy recovery. But even with these facts the record, like those we have already referred to, is creditable to the surgical skill and judgment of the operator.

In discussing Mr. Cripps' paper, Dr. Cullingworth related that he had within the last two and a-half years operated by the intra-peritoneal method thirty-one times. He could not claim the same degree of success for it as for the extra-peritoneal operation, which during the preceding eighteen months he had performed ten times.

¹ *Vide* BRITISH GYNÆCOLOGICAL JOURNAL, vol. viii., p. 75.

Dr. Galabin related that he had not performed intra-peritoneal hysterectomy until within the past six or eight months. Since then he had done intra-peritoneal hysterectomy six times and total extirpation three times. All the patients recovered. Dr. Horrocks had operated by the peritoneal method four times; three patients recovered. Dr. Lewers, Dr. Herman and others, have also operated in this way.

There seemed to be some courteous difference of opinion regarding the successful applicability of the intra-peritoneal method as compared with the extra-peritoneal, and again, between the intra-peritoneal and total uterine extirpation. One speaker related that he always preferred the extra-peritoneal stump; another contended that this procedure would ere long be wholly obsolete, and that the operation of the future must be either intra-peritoneal treatment of the stump or total extirpation of the fibroid uterus.

Total Extirpation. — Returning now to the historical method of observation, it is to Martin, of Berlin, that total extirpation for fibroids is mainly indebted for its popularity to-day. In 1888, availing himself of Bardenhauer's experience in 1881, he began to practise this method. In America, in 1890, Florian, Krug and Eastman, of Indianapolis, seem to have been the first who practised this procedure. But as we have already stated, Boldt, Polk and Baer shortly afterwards were operating by a method which practically was one almost of total extirpation. Space will not permit a digest of the genesis of total extirpation in Germany, America and France, so that we must turn to our own immediate work in England and see how this compares with the intra-peritoneal technic.

W. T. Smyly in March, 1892, at the British Gynæcological Society, recorded three cases of total extirpation of the uterus for fibroids. His first case was operated on in June, 1891. All the patients recovered. Since then Bowreman Jessett² has recently (October, 1895) recorded eight cases. His first

² BRITISH GYNÆCOLOGICAL JOURNAL, part xliii., November, 1895.

case was operated on in July, 1894. Seven recovered, one died. At the same meeting J. W. Taylor showed a specimen from a patient upon whom he had successfully performed total extirpation for fibroids. In 1896, in the March number of the *Edinburgh Medical Journal*, Mr. Christopher Martin relates eight cases of total extirpation of the uterus. All his patients recovered. Six of the patients had fibro-myomata of the uterus; one tumour was small, the others were large. Of the other two cases, one was a hæmatometra with pyosalpinx associated with occluded cervix; the other was a case of perforation of the uterus subsequent to an operation for removal of an "hydatid" mole by another medical man. These two last cases were certainly not likely to be more favourable than the six fibroid tumour cases. All Mr. Martin's cases were operated on in 1895.

We are not aware of any other cases having as yet been published although doubtless there may have been other operations, both of the intra-pelvic and total extirpation methods.

We have thus so far had about 90 to 95 cases of intra-pelvic hysterectomy: Sinclair, 12 cases; Reeves, 2 cases; Heywood Smith, 4 cases; Leith Napier, 3 cases; Treves, 2 or more cases; Pearce Gould, 1 or more cases; Herman, 1 or more cases; Bantock, 9 cases; Thornton, 1 or more; Meredith, 1 case; Jessett, 2 cases; Cullingworth, 31 cases; Milton (Cairo), 4 cases; Cripps, 8 cases; Galabin, 6 cases; Horrocks, 4 cases; Lewer, 1 or more. Whether Maunsell ever performed the intra-pelvic operation he advocated or not we do not know; nor do we presume to state that all the above figures are more than approximately correct. We may also have unintentionally omitted other operations of this sort by London or provincial gynaecologists. We have not considered it necessary for our present purpose to do more than indicate the general bearing of the subject, and do not present this as an exhaustive record. Some of the operators have been more fortunate than others, but so much depends on the nature of the tumour dealt with, that a

relative comparison of a small number of cases in the hands of any two or three gynæcologists or surgeons is manifestly unfair. Cullingworth, who has had the largest experience of the intra-pelvic method in London, stated at the Obstetrical Society that of his forty cases of fibro-myoma operated on by hysterectomy during the preceding four and a-half years, the tumours were gangrenous in three cases. He said that since he had changed from the extra-peritoneal method his mortality had been higher, but he did not believe that this was due to the method. He mentioned that when the cases did well the convalescence of the post-operation patient was very strikingly better with the intra-pelvic treatment of the stump. He did not believe the dangers were greater than those attending the older method. Bantock, whose published hysterectomies up to July 24, 1894, number 211 cases, has had exceedingly favourable results with the extra-peritoneal method. Of 164 extra-peritoneal cases 24 died—a mortality of 14·7 per cent. ; but of 27 cases operated on by his “new method of extra-peritoneal, supra-vaginal hysterectomy” the mortality is returned as only 3·7 per cent. His intra-peritoneal cases had a mortality of 66 per cent., and his complete extirpations up to that date a mortality of 33 per cent. Since then we understand this has been much reduced. With such remarkable differences it is not surprising that Bantock and his colleagues at the Samaritan Hospital have not adopted the intra-pelvic operation.


Experience and special practice of any one method of operation will always unquestionably affect results favourably. For example, of Bantock's extra-peritoneal operations, the first 82 had a mortality of 18 per cent., the last 82 a mortality of 10 per cent., and as we have said, his recent modification performed 27 times has a mortality of less than 4 per cent.

On the other hand, the returns of the various operators referred to show an aggregate mortality for the intra-pelvic operation vastly lower than Bantock—one of the ablest hysterectomists living—has approached.

The question to be decided.—It appears to us that the question for our future consideration is not one of contrast between the extra- and the intra-pelvic operations (using these words in the ordinary conventional sense), but of contrast between a perfected “extra-peritoneal” and a perfected “total extirpation” operation, which is also truly an extra-peritoneal method. By our British surgeons of whose work we have personal knowledge, the following facts are recorded. Smyly, of Dublin, in 1892 wholly removed the uterus by A. Martin’s method. His three cases all recovered. Since then he has had other successful cases, the details of which will be found in the Transactions of the Obstetric Section of the Irish Academy of Medicine. But quite recently—December, 1895—Smyly has been directing his attention to removal of fibro-mycomata by the vaginal operations, *morcellement* or simple hysterectomy. These operations have also been happily practised by Donald of Manchester, Murphy of Sunderland, Heywood Smith, Amand Routh, and many others. This alternative is, however, for the most part applicable, in our opinion, to tumours of a smaller size, and of a somewhat different pathological nature than those for which an abdominal operation would appear best suited—it need not therefore concern us further.

Bowreman Jessett, whose interesting paper appeared in our November issue, had eight total extirpation operations, with one death. Christopher Martin, of Birmingham, had eight operations with no deaths. Galabin has operated three times ; all his patients recovered. Bantock has had four or more cases, with three or more recoveries. Besides these, Mayo Robson, J. W. Taylor, Mrs. Scharlieb, Dr. Heywood Smith and other surgeons have practised the method with success.

So far, then, total extirpation may be taken as an equally safe, if not safer, operation than intra-pelvic hysterectomy in skilful hands. Our material being as yet insufficient, we would refer to August Martin’s, of Berlin, latest statistics of seventy-nine patients operated on by this method since 1893 ;



six died, two from embolism on the ninth and eighteenth day respectively; two from peritonitis; one from collapse. Of Martin's first series of cases, 30 per cent. were fatal; of fifty-four cases reported in the third edition of his book on diseases of women, 9·5 per cent. were fatal.

We confess that after having had a limited personal experience of the "intra-pelvic method" and a wider opportunity for seeing the operations of others, we can see little difference in immediate risk between it and total extirpation. We have, therefore, in view of the extreme desirability of avoiding a long operation, adopted a "perfected" method of extra-peritoneal hysterectomy. The writer first operated in this way in June, 1894. The procedure is a modification of Maunsell's, J. W. Taylor's and Bantock's recent method, with a combination of the mixed method of Wölfer and Hacker, based on Schroeder's old operation; details need not now hinder us. So far all patients have recovered, but the important points are that it may be ended either as an extra- or an intra-peritoneal operation, with little variation in technique. When a clamp is used it is removed in seventy-two hours; it is applied as a safeguard in cases in which the uterine arteries cannot be quickly ligated. The pedicle being closely surrounded with peritoneum is in any case "extra-peritoneal" even if it should be intra-pelvic. Hæmostasis is controlled by ligation of the ovarian arteries, and in suitable cases by ligation of the uterine arteries in their continuity; in any case the broad ligament is ligatured as low down as possible. We regard this, meantime, as an evolutionary operation, from which we may hope to perfect the extra-peritoneal operation for cases in which total extirpation seems to involve too great risk on account of special conditions of the individual patient.

We need not discuss at length the comparative advantages and disadvantages of the three procedures we have already referred to. But we would venture to again point out that the operator who undertakes the intra-pelvic operation has all the difficulties of total extirpation to encounter,

with the additional objection that accurate suturing of the cut peritoneal flaps over the intra-pelvic stump frequently occupies even longer time than any other stage of the operation, and therefore materially adds to the immediate risk of shock. If, on the other hand, no suturing is done, there is not only a theoretical but a practical risk of intestinal obstruction; and the probabilities of septic peritonitis are unquestionably greater, despite the experience of Chrobak, Baer and others. In both intra-pelvic treatment of the stump and total extirpation, the time required by the average operator is considerable—certainly not less than an hour, often much longer. The risks of chilling the patient, exposing the intestines and so favouring post operation intestinal paralysis, and immediate post operation shock, are clinical experiences we cannot ignore. Injury to the bladder or to the ureter may occur in any of the three methods, but is probably most likely in total extirpation; then in intra-pelvic hysterectomy the risk of post operation hæmorrhage is greater than in either of the other two, for in this method considerable bleeding—sufficient to cause a fatal result—may happen rapidly from slipping of a ligature, even without manifest signs of internal hæmorrhage. The bowel may become adherent after total extirpation, but if the peritoneal edges are drawn down as in vaginal hysterectomy, or even kept apart with the gauze with which drainage is secured, this is not very probable. So also the alleged weakening of the pelvic floor is a theoretical objection; this our experience of vaginal hysterectomy ought to have previously convinced us of. It is possible that ante-operation rectal injections of saline fluids or of nutriment, with some method of filling the abdominal cavity with warm saline solution, so as to maintain the natural temperature and avoid chill during a prolonged technique in securing vessels, would lessen the greatest risk—that of shock. To shorten the actual time required, one might use clamps passed *per vaginam* to secure the uterine arteries, as in the clamp operation for vaginal hysterectomy. This, however, is less surgical, in our opinion, than ligature.

But for such cases as demand a really rapid operation, say, not more than half an hour—and many debilitated patients cannot safely stand more—the extra-peritoneal operation must still be reserved. If the tumour is not too large it may be removed by the vagina ; if there is probability of tumour degeneration, *morcellement* would be unsuitable. *Morcellement* is always a tedious, although in suitable cases usually a safe, process.

In the hands of experts we may, according to Cushing, expect a mortality as follows :—

Extra-peritoneal operation 14·5 per cent.

Total extirpation operation... .. 14·5 „

Intra-peritoneal (modern) operation 10·5 „

We believe this last figure, although based on 238 cases, is too favourable. We cannot find any evidence supporting the view that, given equally large tumours with equally difficult complications, intra-pelvic treatment of the stump will afford better results than extra-peritoneal or total removal of the uterus. Septicæmia may occur in any case, and it is generally, if not always, to the abdomen, not the vagina, that we must look for the site of origin.

We believe that the future will show that earlier operations for uterine fibroids should be undertaken than has been our practice in the past. When a fibroid uterus can be removed by the vaginal route the mortality should be infinitely less than by the abdomen. But this method is only likely to be used when the tumours are not larger than a foetal head, and the vagina is fairly large, and when there have been no previous peritonitic attacks tending to cause difficult adhesions or complications from tubal or ovarian disease. In suitable cases the mortality of vaginal hysterectomy for fibroid should not be more than from 3 to 5 per cent.

In a considerable proportion of cases extra-peritoneal hysterectomy will still be practised ; if we can reduce its average mortality to 8 or 10 per cent. we have no reason to discard it. We believe some form of elastic ligature, or the

early removal of the constricting wire, or some modification wherein we can wholly get rid of the wire, is only a question of time. This should be the operation of election for beginners. The modern extra-pelvic operation will, we feel sure, eventually be abandoned for perfected total extirpation. Much experience and careful clinical observation will be required to determine a generally useful technique. But every fibroid uterus demands separate and special study. No one operation is universally best.

REVIEWS.

SURGICAL DISEASES OF THE OVARIES AND FALLOPIAN TUBES, INCLUDING TUBAL PREGNANCY. By J. BLAND SUTTON, F.R.C.S. Second Edition, pp. 420, with 146 illustrations. Cassell & Co., 1896. Price 21s.

Nearly five years have elapsed since the publication of the first edition of Mr. Sutton's book—five years full of surgical progress and deductive possibilities. We, therefore, expected to find great alterations, even great improvements, in the second edition now before us. We are not quite justified in saying more than there are many alterations and several improvements. The book still retains its main characteristic—the stamp of individuality. It is Bland Sutton himself whose voice we hear; one who, having an exceptional combination of special culture in both scientific and practical paths, gives vent to no uncertain opinion if a certain one has been arrived at, even by himself alone.

The differences and inequalities between the first and second edition are doubtless partly due to the fact that the second edition has been written by a busier man than he who wrote the first. Although the book is brought well up to date in many ways, it seems on careful reading to have been done so on no special plan. For example, chapter v. on "Infective (Inflammatory) Diseases of the Ovaries," is distinctly meagre concerning tuberculous ovarian disease. The work of Whitridge Williams and of several other recent observers might justifiably have been referred to. Is cirrhosis of the ovary properly classified as an infective disease?

In the following chapter (vi.), we find a new arrangement of matter. All gynæcologists are indebted to Mr. Sutton for his work on solid ovarian tumours, and the attention here devoted to this subject is to be greatly commended.

En passant, we would remark that all reproductions of microscopic appearances would be greatly increased in value to students if the exact magnification were in every case mentioned. In discussing ovarian dermoids, mention is made of Dr. Walter's case, one of those showing curious sebaceous gland, ball-like formations inside the cyst. A specimen shown by Mr. Butler Smythe at the London Obstetrical Society in February, 1895, and on which Mr. Bland Sutton was asked to report, seemed to deserve even greater notice, but nothing is said of it.

The rate of growth of ovarian cystic tumours is an important subject in chapter xi. Our author has discussed it; we hope at some future time he will be able to find time to do so more exhaustively.

Mr. Sutton persists in his belief that gangrene of the cyst wall of an ovarian cyst "can only take place when air is admitted from without." The reviewer agrees that, unless with these inducing causes, gangrene of an ovarian cyst is rare, but as he personally showed such a condition in a specimen exhibited at the Obstetrical Society of London in April, 1892, he must again dispute this *dictum*.

At page 84 we find the word "ovariotomised," which we suppose is justifiable if every author has a right to coin new words to save himself repeating those usually employed.

Part iii., on "Tubal Pregnancy" is admirable. We esteem it to be the best brief account written in any language. We have nothing but praise to bestow on this section.

In part v., especially in chapter liv., we find much to praise and something to criticise. There are many side-lights thrown on philosophical speculations, there are not a few sound dogmatic opinions, and in many respects the matter is well brought up to date. But there are certain

utterances of opinion which are manifestly founded on imperfectly considered material, *e.g.*, "when double oöphorectomy is performed to anticipate the menopause, and menorrhagia persists after the operation, it signifies that a submucous myoma (polypus) exists. This fact has been so often demonstrated that it is needless to adduce examples." We agree that in many such instances this will be found; but Mr. Bland Sutton is quite wrong in regarding the existence of a submucous uterine polyp as the *only possible cause of hæmorrhages* after complete double-sided removal of the appendages has been effected. Not to go further than to turn back one page of his own book, the case he quotes from Mr. Christopher Martin was accompanied by another case in which general uterine fibrosis was held to account for the post-operation bleeding after double oöphorectomy. It is now well recognised as a clinical fact that double oöphorectomy seldom, if ever, benefits patients who are the subjects of soft fibromyomata uteri.

The increased number of illustrations may have led to considerable additional expense, but in this second edition we have only 420 pages of letterpress as compared with 488 in the first edition. We think that the increased price of the book to 21s. for a revised edition and 41 additional illustrations (five coloured lithographs are now omitted) is somewhat more than it should be; still, this is a matter for the publisher and the book buyer, rather than for the writer and the reviewer.

We congratulate Mr. Bland Sutton on his edition. If we have said anything other than praise it is because we know our author can not only do good work, but the best work, and we think that if he could have more leisure in preparing his next edition, and could adopt a somewhat more definitely settled plan of arrangement and references, his book should be, of all the smaller books, the leading authority.

LEITH NAPIER.

A MANUAL OF MIDWIFERY FOR MIDWIVES. By FANCOURT BARNES, M.D., F.R.S.Edin., Consulting Physician to the British Lying-in-Hospital. With illustrations. Seventh Edition. Smith, Elder & Co. 1896.

There is not much to say in noticing a book that has reached its seventh edition. This fact shows the work has supplied a want. The last edition has been improved by a new chapter on antiseptics, including the latest laboratory researches of Professor Tarnier. Dr. Fancourt Barnes's excellent manual has been translated into Italian by Professor Chiarleoni and into Burmese by the Countess of Dufferin's fund. We can recommend it as one of the best guides to midwifery for midwives and nurses that has been published.

L. N.

SUMMARY OF GYNÆCOLOGY, INCLUDING
OBSTETRICS AND PÆDIATRICS.

GYNÆCOLOGICAL.

VENTRO-FIXATION DES UTERUS, SCHWANGERSCHAFT, UND
QUERLAGE DES KINDES. By J. MILANDER. *Zeits. f.
Geb. u. Gyn.*, xxxiii., p. 464.

Writing from Professor Gubaroff's Clinic at Dorpat, the author points out that though Olshausen's method was not published till 1886, Sānger was, in 1891, able to collect fourteen cases of pregnancy after ventro-fixation. Three were personal observations, and in one the woman aborted at the sixth month, of a macerated three months foetus; another woman, after ventro-fixation of a retroflexed but movable uterus by Gottschalk, aborted twice, but again conceived and had a normal labour at term, after the band of fixation had been separated. Sānger, nevertheless, differed from Gottschalk as to the accident being due to the fixation, and with Leopold concluded that ventro-fixation did not seem to have any detrimental influence on the course of pregnancy and labour.

Later in the same year Sānger drew attention to three cases of Fraipont's, in all of which there was much pain in the first three or four months; the labours were normal, though premature, in one case at seven-and-a-half months from ill-treatment, and in another without any known cause; the third case went to term.

Fraipont's view was that, with care in the early part of pregnancy, abortion might be avoided, and that by the

weight of the uterus, the pressure of the intestines and the tension of the vagina, the band of adhesion is extended as if it were a central round ligament, and Flaishlein, two of whose cases (one still gravid, the other a cross birth) are given, thought not only that the adhesions of the fundus uteri to the peritoneum become succulent and extensible, but that the loose attachments of the folds of the peritoneum contribute to the course of pregnancy being normal.

Löhlein, reporting two cases, both of which suffered in the third to fourth month from severe vomiting, but ended in normal childbed, the one after a normal labour of seven hours, the other after delivery by forceps, pointed out that the adhesions become more yielding and extensible owing to the more active circulation of pregnancy, and undoubtedly share with the lig. lata et sacralia in puerperal involution.

After citing some cases (two very complicated) of Edebohls and others, given by Howitz and Meyer, Bion, Currier, Condamin and Gouilland, Miländer refers to the Thesis of Léon (Lyon, 1894), based on sixty ventro-fixations by Larvyenne. Three of these women conceived, one had a normal pregnancy and labour; two aborted, but one had afterwards two normal labours. Léon quotes a number of cases of normal pregnancy, labour and childbed (from Lamort's Thesis, Bordeaux, 1894), one each of Jeannel, Chaput, Slaviansky, Pinard and Bar, a case of Routier's that had two normal labours after the operation, and two cases of Sinclair's, one in the eighth month of pregnancy, one again pregnant, after a normal labour followed by an abortion due to influenza. Léon attributes abortion and loss of fixation to mistakes in technique; a sufficient number of sutures should be carried at least 0.5 cm. through the anterior wall of the uterus, avoiding the fundus.

Miländer then cites two cases delivered by forceps after normal pregnancy, and one Cæsarian section (almost intra-peritoneal) reported by Poltowicz among twenty cases of ventro-fixation; a case of Frommel's delivered by turning. Gubaroff's Cæsarian section on a 23-year-old 1-para four

years after a ventro-fixation performed by Küstner. In this last case, after two unsuccessful attempts to turn, it was decided to open the abdomen, separate the adhesions, and allow the labour to proceed, but severe and irrepressible hæmorrhage from the divided attachments of the uterus, compelled Küstner to deliver at once. The woman had a normal childbed, and when examined after her discharge the uterus was found to be again adherent to the abdominal wall, enlarged, but movable.

The two cases given by Miländer himself were also after operations by Küstner, the first for prolapse of the vagina and retroflexion ; the second, for total prolapse of vagina and uterus, he had supplemented by anterior and posterior colporrhaphy. The former woman was delivered of a fully developed female child, presenting in the first occipital position ; some hæmorrhage after the placenta had been expressed was controlled by friction, and she had a normal childbed. On the ninth day the uterus was in good position, fixed to the abdominal wall and movable. The other case was a cross birth back to back, with extreme distension of posterior wall of the uterus ; dilatation by colpeurynter in the vagina and by hand, podalic version and slow extraction of a ripe female foetus (revived), rupture of perinæum (long from perinæorrhaphy), placenta expressed. Six catgut sutures, normal childbed, healing. On discharge the uterus was in good position and movable, fixation retained.

Of 74 tabulated cases of pregnancy after ventro-fixation 1 was reported as dead, 10 as still gravid. Of the remaining 63, 6 aborted, 3 were delivered prematurely, and 54 at term, but no less than 11 cases required obstetric interference, and inefficient pains are reported in two others. The forceps were used in 4 ; 2 head presentations, and 2 cross births were turned ; 1 foetus was extracted by the feet, and Cæsarian section delivered two others. There were 5 abnormal presentations, 1 of the ear, 3 cross births, and 1 footling, but except for some pain at the point of fixation in a few cases, occasionally vomiting, the abortions recorded,

and 1 threatened in the ear-presentation, there was no serious trouble during pregnancy. The subsequent position of the uterus (not stated in every case) was one of anteversion, the fixation was preserved and the mobility not diminished. (In one of Olshausen's cases the fixation was loosened, and in 2 cases the uterus was retroflexed, in 1 somewhat retroverted.)

The proportion and kind of artificial deliveries is remarkable, but the number of cases is not large enough for a study in comparative statistics.

The admitted causes of cross births are : (1) frequent confinements ; (2) lax abdominal walls ; (3) mobility of the uterus and of the ovum ; (4) pendulous belly ; (5) contracted pelvis ; (6) tumours ; and (7) malformations of the foetus. Flaischlein's case was a II-para of 35, ten years after her first confinement, pelvic measurements are not given ; the child was turned and extracted after a prolonged labour. Gubaroff's case was a 23-year-old I-para, with tense abdominal walls and a normal pelvis ; Miländer's own case was, it is true, a multipara, but the pelvis was normal, there was no laxity of the abdominal walls, and all her earlier children had presented the head, and he does not think that even in this instance the cross birth should be set down to the repeated confinements. The ligamenta rotunda were distinctly palpable below the navel, whereas in an ordinary cross birth the fundus of the uterus extends from two to four fingers' breadths above it. The fundus could not reach a level in this case without greatly extending or breaking the band of fixation, and therefore, owing to the growth of the foetus, the uterus was obliged to enlarge in another direction, *i.e.*, transversely. If by firm adhesions the uterus be absolutely prevented from enlarging, abortion or premature labour is the mechanical consequence, but though, by the nature of the adhesions, the fundus be prevented from rising to the costal arch, should compensatory enlargement take place in a transverse direction, towards the end of pregnancy the long axis of the foetus must be accommodated to the transverse

axis of the uterus. Cross births are to be accounted for in this way, but, as these cases show that the enlargement of an adherent uterus may go on without danger, rupture of the uterus, when it occurs, must depend on other causes than mere ventro-fixation. Olshausen is right in insisting that the Czerny-Leopold operation gives too broad a band of adhesion between the uterus and the abdominal wall; to avoid these malpresentations the mobility of the uterus should be as little interfered with as is compatible with securing its anteversion.

At the close of his paper he states that ventro-fixation was only suitable for a very few, otherwise hopeless, cases of adherent retroflexion and prolapse, and Küstner disapproves of it for young people. The cases here given confirm these views; other operations less dangerous to the patients give very good results.

Gubaroff seldom performs a ventro-fixation, and in his lectures lays great stress on the Alexander-Adams' operation as being easier, less dangerous, and more immediately beneficial.

J. J. M.

TOTAL EXTIRPATION EINER AN COLLUMKREBS ERKRANKTEN
GEBÄRMUTTER IM J. MONAT DER SCHWANGERSCHAFT.
By Dr. FEHLING (Halle). *Monatschr. f. Geb. u. Gyn.* Bd.
ii., Hft. 5.

Fehling reports the following case :—A woman, aged 32, seven months pregnant, was found to have in the posterior lip of the cervix a soft, irregular easily bleeding cauliflower cancer. The surrounding cervical wall was hard. She complained of no pain, of no bad discharge, and had only bled slightly earlier in pregnancy. The following operative interference was carried out on July 19, 1895. The abdomen was opened. The uterus was brought through the opening, the broad ligaments were compressed by assistants' fingers; the uterus was opened and the child and secundines .

delivered. The uterus quickly retracted but did not contract quickly. It was therefore surrounded with an elastic ligature. The broad ligaments were then ligatured and divided, and the uterus ligatured over the elastic ligature, the stump being closed with sutures passed from before backwards. The abdomen was then closed. Vaginal extirpation of the stump of the uterus was then performed. The patient made a good recovery.

J. C. WEBSTER.

BAKTERIOLOGISCHE UNTERSUCHUNGEN DES GENITAL KANALS BEIM WEIBE IN VERSCHIEDENEN PERIODEN IHRES LEBENS. By Dr. STROGANOFF (St. Petersburg), *Monatschr, f. Geb. u. Gyn.* Bd. ii., Hft. 5.

The author has made an elaborate series of experiments regarding the vagina of the new-born child, he says :—The new-born child's vagina is, in the great majority of cases, sterile, as it is during intra-uterine life. Microbes may enter soon after birth. After the first bath they are almost always found; the secretion found in the vagina is faintly acid. Baths, washing, application of oils favour entrance of germs. A breech presentation favours the premature entrance of germs. Microbes which will liquefy gelatine are found seldom in the first two weeks.

As regards the influence of menstruation on germ-life in the vagina and cervix in women, he says :—The vagina contains before, during and after menstruation masses of germs, just as at other periods they are found in greater or lesser numbers according to the amount of the menstrual flow, the condition of the blood and the nature of the germs. The acid reaction of the vaginal secretion becomes in the fornix during menstruation, neutral or alkaline.

The cervix during menstruation in many cases is sterile. Its secretion is alkaline; 30 per cent. of the tubes of meat-gelatine showed no growth when inoculated from the vagina.

but 90 per cent. when inoculated from the cervix. None of the gelatine preparations were liquefied by the cervical germ-growths.

Regarding the condition of these parts in old women, he states :—The vagina contains in all cases many micro-organisms of various kinds. The most numerous are the rod-like forms; these are on the average smaller than those found during sexual life. The vaginal reaction is weakly acid. In the neighbourhood of the cervix it is neutral or alkaline. Microbes which liquefy gelatine were found only in one case in which prolapsus uteri was present.

In about half of the cases no microbes can be cultivated from inoculations taken from the cervical canal. In all cases of prolapsus uteri the cervix contained germs, however. The reaction in the cervix is alkaline.

As regards the condition during pregnancy he says :—In the vagina of the pregnant woman large numbers of microbes are found. In most normal cases the short rod-like forms predominate. Rarely are found those which liquefy gelatine. The vaginal secretion is decidedly acid. Besides microbes one sees epithelial cells and white blood-corpuscles. The cervix contains in the majority of cases no microbes. Its secretion is alkaline. In no case does it contain gelatine-liquefying microbes.

With regard to the condition of the parts in states of abortion he says :—The vagina always contains microbes of various kinds. The secretion varies in reaction according to the amount of blood escaping from the uterus. The cervix contains germs in most cases. They varied in numbers according to the manipulations carried out by way of the genital tract.

Regarding the relation of the vaginal secretion and the vaginal microbes to the staphylococcus, he agrees with Döderlein that the acid reaction is inimical to the latter; when the reaction is neutral they develop. He believes also that the product of the vaginal germs is important in destroying the pyogenic staphylococci and streptococci.

The causes of the sterility of the cervical canal he believes to be the bactericidal influence of the cervical mucus as a constant condition ; the menstrual flow and the post-partem cleansing as occasional factors.

J. C. WEBSTER.

MICROBIOLOGY OF THE FEMALE GENITAL ORGANS,
JACOBS. *Polyclinique*, 16, 1894. *Cbt. f. G. u. G.*, No. 32,
1895.

This paper is a *résumé* of various recent investigations. There are no bacteria in the vagina of the new-born, but later on, even in maidens and women in good health, some have found their way in from the vulva or intestine, or have been introduced by the finger or otherwise, and not only Döderlein's bacillus, but sarcina, yeast fungus, staphylococci and, streptococci, may be met with. If the vaginal secretion be acid these bacteria are weak and of slight virulence, but if the secretion be neutral or alkaline, *e.g.*, in gonorrhœa, they are more poisonous. They are greatly multiplied during menstruation, and are rare during the acid secretion of pregnancy, but after abortion, when, owing to the hæmorrhage, the vaginal secretion is alkaline, many infectious microbes are present, and special precautions are therefore necessary. After the menopause the secretion is acid towards the vulva and alkaline towards the cervix, and here also hygienic measures must be attended to.

In the collum uteri, during pregnancy, the alkaline cervical mucus contains many micro-organisms which do not liquefy gelatine, and in abortions some micro-organisms are present, generally due to intra-uterine manipulation ; during menstruation a few are met with, otherwise the cervix contains no microbes in the healthy adult, nor, apart from child-bed, do the corpus uteri or tubes. The lochial discharge offers them a way into the vagina from without, or during child-bed from the tubes.

J. J. M.

EXTIRPATION OF THE VAGINA. By A. DUHRSEN (Berlin).
Cent. f. Gynäk., xix., 9, 1895.

The method of operation preferred by Dührsen in case of need, consists of a deep incision through the vagina and perinæum, extending from the fornix vaginæ to the frenulum, continuing along the perinæum behind the line connecting the anus with the tuber ischii. He also includes amputation of the cervix with the excision of the vagina.

In order really to understand his *modus operandi*, some drawings (which he appended) are necessary to make his description intelligible. It is as follows :—

The vaginal carcinoma should be excised by the vagino-perineal incision, and separated from its basement membrane. If this separation has to be continued to the fornix vaginæ, the base of the broad ligament must be ligatured and detached from the cervix. The anterior vaginal fornix should be opened ; the cervix, after being fixed, should be divided downwards, the other broad ligament having been separated and clamped by forceps meantime. Eventually, even after the removal of all diseased parts, extirpation of the uterus may be necessary.

If the carcinoma has invaded the whole vaginal wall, Dührsen recommends the use of the thermal cautery over the affected parts, and a deeper incision of the vagino-perinæum with a knife. Only after complete removal of all disease can sutures be thought of.

L. W.

ON EXTIRPATION OF THE VAGINA. By OLSHAUSEN,
Cent. f. Gynäk., xix., 1, 1895.

Primary carcinoma of the vagina usually attacks the posterior vaginal walls. Commencing there, it usually involves the portio, passing on to the lateral and anterior walls.

In the usual operation for removal, it is impossible to avoid frequent contact with the carcinoma itself during the

operation. Olshausen has therefore employed a different manner in three cases. In each case a great portion of the vagina had been attacked, and in the last case, removal of the uterus was necessary. He operated as follows :—

The perinæum was divided obliquely, and he worked directly between the rectum and vagina, Douglas's pouch being held from the rectal side by an assistant. In cases where extirpation of the uterus is included, he recommends opening Douglas's pouch ; the uterus being tilted backward, the ligaments on both sides can be detached, cutting through the detached ends near the vagina with scissors—the carcinoma is then excised.

Lastly, with a clean separation from the bladder, the cervix uteri can be detached. The first part of the operation is the same, in cases where extirpation of the uterus is not necessary ; in these cases, the commissure between the lumen of the vagina and the wound already made will be found the most convenient place through which to excise the carcinoma.

In cases in which the extirpation of the uterus is not necessary, the first part of the operation is the same, and a communication between the perineal wound and the lumen of the vagina is afterwards made at the most convenient spot, and the carcinoma excised.

With a very narrow vagina, the last part of the excision is materially facilitated if the posterior wall is divided as far as the new tissues. With regard to permanent results, which have hitherto been had (out of 16 cases, 15 recurrences in two years) Olshausen believes that by this method recurrence of the disease may be certainly prevented.

THE OPERATIVE TREATMENT OF PRIMARY CARCINOMA OF THE VAGINA. By LAURENSTEIN (Hamburg). *Deutsch. Ztsch. f. Chir.*, xli., 4 and 5, 1895, and *Schmidt's Jahrbch.*, B., 249, 351, 1896.

During the last sixteen years the author has operated for vaginal carcinoma in the two following cases :—

(1) A woman, aged 48, who had had four natural labours,

and had not suffered from any disease of the pelvic organs, nor ever worn a pessary, suffered from cancer of the posterior wall of the vagina, not affecting the uterus or parametrium; the inguinal glands on the right side were swollen. After division of the perinæum and after its detachment from the rectum, the new growth was extirpated through sound tissue. The patient recovered, but after three and a-half years the cancer recurred in the portio, and the uterus was extirpated *per vaginam*. The patient has for three years since the second operation been well and able to work.

(2) This patient was 68 years old, and had had a fæcal discharge from the vagina since the summer of 1893. In the centre of the posterior vaginal wall was a funnel-shaped perforation surrounded by raised indurations which extended downwards to the perinæum, upwards to the uterus, and on both sides to the wall of the pelvis. Operation: an artificial anus was made over the left anterior superior spine, and the recto-vaginal septum excised. Douglas's pouch having been opened it was sutured, and the wound treated with tampons of iodoform gauze. Recovery.

VESICO-VAGINAL DOUCHING. BY PROFESSOR TOLOTCHENOFF'S METHOD FOR FISTULÆ. (Vratch, August 10, 1895.)

In cases of vesico-vaginal fistula, when the operation has an unfavourable course the condition quickly returns, owing to the soiling of the field of operation. For the purpose of avoiding this Dr. Feduloff proposes to use Professor Tolotchenoff's method of vesico-vaginal douching. He describes this method as follows:—A bed pan is placed under the patient as she lies in bed, this pan has a rubber rim so as to avoid pressure on the soft parts, and a cushion is put under the loins for the patient's comfort while lying. Esmarch's bag is fixed above the patient, and is furnished with a long rubber tube having a stop-cock in its end piece. A soft Nelaton catheter is fixed into the end piece and then passed

into the bladder per urethram ; it is fixed by strips of sticking plaster to the inner and upper part of the thigh. The bag is filled with a 2 per cent. solution of boracic acid, warmed to about 40° C. The tap is turned so that the fluid escapes from the catheter by drops. As the fluid collects in the receiving vessel it is carried over into another vessel by means of a syphon. The latter vessel is on the floor. In this way the patient is never disturbed. The value of this method is seen by the author in the fact that owing to its simplicity it may be used in a small village hospital, since it requires neither the time nor the superintendence of the surgeon. Further, it enables patients suffering from vesico-vaginal fistula to be kept in the general ward, for there is no odour at all arising from its use ; and finally the ground for the operation is quickly and with certainty cleansed and disinfected, so that the patients do not tarry in the hospitals, which may be of great importance when the space is limited.

The author operated twice after such preliminary measures, and he was very well satisfied with the results he obtained, and especially with the rapidity of their progress.

FRED EDGE.

A CASE OF DERMOID CYST IN A CHILD. By Dr. DANDOIS.
Archives de Gynécologie et de Tocologie, vol. xxiii., No. 3,
March, 1896.

Ovarian tumours are rarely met with in childhood ; the most common form, proligerous cysts, coincide with the active period of the gland, and are even then less frequent before the age of puberty than after the menopause. Dermoid cysts, whose origin may be traced to the foetal state, are seldom met with in very early life.

In some 200 cases collected by Olshausen, there were only 8 instances of their development before the age of 10, while there were 35 cases between the ages of 10 and 20 ; 44 between 30 and 40 ; 37 between 40 and 50 ; the remaining 27 cases being developed after the age of 50 ; thus the

chief interest of the following observation lies in the extreme youth of the patient.

In November, 1893, Dr. Vincart, of Gerpinnes, being summoned to the child E. B., of Tarcienne, who had for some days been suffering from abdominal pains, found that she had had an abdominal tumour, already somewhat voluminous, but without distinctive symptoms. No information was forthcoming as to the date of the appearance of the tumour; the parents had never suspected its existence or sought to account for the matter, since the child had up till then shown no signs of anything abnormal. The abdominal pains, moreover, were soon soothed, and from this time the tumour began to grow rapidly, without inducing any kind of functional trouble, and without any definite re-action on the general health of the little patient.

Two years later the abdomen was really of an enormous size, and such was its steady development that a fatal issue might be feared within a short period, unless surgical intervention was resorted to. Accordingly the parents decided to follow the advice of Dr. Vincart, and brought the child, then 7 years old, to me.

The photograph of the patient renders it unnecessary to go into the details of the examination.

It was easy to diagnose the nature of the tumour. The presence of numerous bony parts scattered here and there about the mass, which was of an elastic consistency, and slightly fluctuating, immediately led me to the belief that I had to deal with a dermoid tumour, which coincided with the view of the medical attendant. It was, therefore, necessary to ascertain its starting point and the nature of its connections.

Without overlooking the fact that the ovary is the favourite seat of dermoid cysts, I judged it right in the present case to disregard this organ, for the following reasons:—

The abdomen had attained its maximum development in its superior half on a level with the epigastrium and

the hypochondrium; at this spot the inferior girdle of the thorax, which was pushed forwards, notably the ensiform cartilage, seemed to be united with the osseous frame, which bounded and limited the tumour at this line. Besides this, the dulness of the tumour was confused with the hepatic dulness, whilst there was a zone of intestinal resonance at the hypogastrium; finally, whilst, as I have said, the tumour could not be isolated above, its limits were well defined toward the lower part at a marked distance from the pubic girdle. In this case I need scarcely add that it was out of the question to employ either vaginal or rectal palpation.

I fancied that it was a case of a rare kind of tumour, arising in the mesogastric or epigastric region, and from the mesentery or the vertebræ, the more so as Tillaux has described a tumour almost identical in aspect under the name of teratoma of the posterior cavity of the omentum.

In any case surgical intervention had become imperative, and the child was removed to a pay-ward of the hospital for the operation.

The above-mentioned symptoms, quite abnormal in cases of ovarian tumour, proved during the operation to be due to the presence of a long pedicle, thanks to which the tumour had been able to develop in the superior portions of the abdomen which best lend themselves to distention, whilst the intestinal coils were crushed back into the false and true pelvis.

It was easy to extract the tumour *en bloc*, by means of an incision from the xyphoid cartilage to a few centimetres above the pubis, occupying consequently almost the whole of the elevation of the abdomen. There were a few slight adhesions to the omentum, but although nothing had been observed in the health of the child to lead to any suspicion of the real state of things, I found the surface of the omentum and of the parietal peritoneum as well as of the pedicle of the tumour covered with tubercular granulations.

The advantage of the operation has thus been double,

since as all are aware, though no one can explain its action, the simple fact of abdominal incision has the most beneficial effects on peritoneal tuberculosis.


In one of my cases—that of a young girl—there existed, together with severe ascites, not only tubercular granulations of the peritoneum, but hundreds of tubercular nuclei of infiltration lodged in the intestinal walls, some even as large as a walnut. Now, after more than three years since I performed laparotomy, the cure of the abdominal affection remains complete.

To return to the subject of this article : the tumour which was thus extracted weighed nearly seven kilogrammes, one quarter of the entire weight of the child. It consisted of a tumour of mixed character, a combination of dermoid and proliferous cysts, hence the enormous development it had attained, dermoid cysts pure and simple never reaching such a volume. The surface of the section brought into view cavities with colloidal contents, alternating irregularly with other cavities filled with hair and sebaceous matter. The osseous parts alone weighed one third of the entire mass, but presented no regular form ; a few teeth were dotted about here and there.

The results of the operation were excellent, so much so that after eight days the child was able to go home, and now, two months later, she is an altered being.

AN INVESTIGATION INTO THE NATURE OF THE VARIOUS EXUDATIONS AND TRANSUDATIONS FOUND WITHIN THE BODY ; (a) SPECIAL ATTENTION BEING GIVEN TO THE EXAMINATION OF THE DIFFERENT FORMS OF FLUID FOUND IN THE VARIOUS CYSTS ORIGINATING WITHIN THE FEMALE PELVIS ; (b) THE INVESTIGATION OF PLEURITIC, ASCITIC, ŒDEMIC, AND OTHER FLUIDS. By Dr. HUGH R. SMITH, Pathological Laboratory, University College Hospital, London. From *Report of the Scientific Grants Committee of the British Medical Association*, August, 1895.

Dr. H. R. Smith reports that he has been enabled to



make a complete chemical examination of twenty-four different pathological fluids, including six ovarian tumours, two parovarian, eight cases of ascites, three pleuritic effusions, two hydroceles, one œdema fluid, one dermoid fluid, and the contents from one pancreatic cyst. In every case he has estimated the specific gravity by means of the picrometer; the total solids, water, and ash have also been determined. The total quantity of albumen has been estimated by weight after precipitation with absolute alcohol; it has also been estimated by Esbach's method in order to form some definite idea of the accuracy of this latter method; the presence or not of pseudo-mucin and nucleo-albumin has been determined; and the total quantity of nitrogen has been estimated by Kehjdahl's method, and this compared with the total albumin to determine if it were all accounted for by proteids, or whether some were due to extractives; the total alcoholic extract and ether extracts (so-called fats) were estimated, and in the latter the percentage of cholesterin, lecithin, and fat acids have been determined. The results show conclusively that the chemical analysis of pathological fluids is not to be relied upon for assisting in the diagnosis as to the origin of the fluid, with the exception that fluids of an inflammatory origin contain more albumin than simple effusions. In no instance was any single constituent or group of constituents present in such a form or quantity as to enable one to form any reliable idea as to the origin of the fluid. One interesting fact brought out in these researches is that the presence of pseudo-mucin is by no means pathognomonic of ovarian fluid, as was once imagined. Dr. Smith detected its presence in the following fluids in addition to ovarian and parovarian fluids, in ascites of varying origin, in one case of pleurisy, in one of hydrocele, and in dermoid secretion. The total salts in all the fluids were exceedingly constant, varying only from 0.54 per cent. to 0.82 per cent. The percentage of cholesterin, lecithin, and fats varied very greatly, and this variation bore little or no relation to the nature of the fluid. L. N.

IN SUPPORT OF THE VALUE OF KÜSTER'S SIGN. By SCHEUNEMANN. (*Ztschr. f. Geburt. u. Gynäk.*, xxxii. 2, p. 242, 1895.)

The accuracy of Küster's sign (position of the tumour in the middle line in front of the uterus, return to the position after the tumour has been pushed away from it) for the diagnosis of dermoid growths of the ovary has been greatly doubted. Out of nine cases of operation for dermoid cysts of the ovary in the Women's Hospital of Breslau, the diagnosis of dermoid was come to in five cases by the aid of this sign ; in two cases the sign was not present owing to intra-ligamentary development and adhesions ; the other two cases are explained by the presence of torsion of the pedicle and rapid growth of the tumour in a senile woman amenorrhœic for years. Scheunemann considers that the formation of the pedicle has nothing to do with the position of the dermoid, in none of his cases was the pedicle formed solely of the ligamentum ovarii, but the Fallopian tubes and broad ligaments were always involved also. He holds that Mandelstam's explanation is correct. This states that since dermoids are specifically lighter than the surrounding viscera, they therefore tend to gain the highest part of the abdominal cavity.

FRED. EDGE.

OBSTETRICAL.

ON TWIN ABORTION WITH BOTH OVA INTACT. I. By M. BOUCHACOURT; II. By M. BUDIN; III. By M. GUENIOT. (From the *Journal de Médecine de Paris*, vol. viii., No. 13, March 29, 1896).

(1) M. Bouchacourt brought forward a case of a woman aged 27, a deaf-mute, who was about three months *enceinte* when abortion took place.

The first ovum was expelled in two contractions. First came the expulsion of the ovum, covered with the unbroken amnion, that is to say, containing the amniotic liquid, the

embryo and the cord, which was ruptured at the level of the insertion of the placenta. The insertion was indicated by a slight projection on the surface of the ovum. Next followed the second ovum in one mass complete with its placenta; it was enveloped by the chorion, the villousities of which were numerous, and roughened the surface except at one point, that at which probably the two ova had adhered. Lastly, the placenta of the former was extracted after some minutes by means of the fingers introduced into the uterus. This placenta was thus detached, and the hæmorrhage, which had begun, was arrested.

By palpation it was possible to demonstrate that there was but one uterine cavity.

(2) M. Budin said he wished to draw attention to one point in the above. The part expelled by the first contraction consisted of a pouch which contained the amnion, the amniotic liquid, the foetus and the cord; the vessels of the umbilical cord being ruptured at about 2 millim. above the point where the amnion, leaving the chorion, passed over them, covering them with a sheath and reaching up to the umbilicus. This explains how the pouch of liquid, which contained the foetus and was closed on every side, had been formed. In connection with this case, he remembered that this kind of abortion had been divided into those which took place complete in one contraction, and those which took place in two stages, when in the first class the ovum and all its parts come away intact at once, and in the second, the membranes are ruptured and the embryo first expelled, the rest following later. It must not, however, be overlooked, that sometimes when the latter event has occurred, painful uterine contractions supervene, which result in the elimination of a soft fleshy mass, the hypertrophied mucous membrane of the uterus, or *membrana decidua*. In this case there are three stages, and the third stage is generally unheeded, yet it has a distinct importance, as it may be accompanied by pains and by hæmorrhage. Besides, it sometimes happens that the hypertrophied *membrana*

decidua not being got rid of, and remaining in the uterus, has become the occasion of dangerous infection.

(3) M. Gueniot remarked, that it was usually the case that the placenta and the *membrana decidua* came away together at one and the same time, when the ovum had been ruptured and the embryo expelled ; consequently the third stage of which the last speaker had reminded them was of great rarity. The great danger of the retention of the *membrana decidua* was, he said, that it was apt to lead to hæmorrhage. He remembered having seen some thirty-five years ago, with M. Fournier, a woman who had some time previously had a miscarriage. The ovum had been entirely expelled, so it appeared, and the patient had resumed her ordinary avocations, when suddenly she was seized with hæmorrhage so severe as to be seriously alarming, and this was due to portions of the placenta and of the *membrana decidua* which had not come away.

DIE RESULTATE VON 60 FRUHGEURTSEINLEITUNGEN
MIT BESONDERER BERUICKSICHTIGUNG DER BARNES-
FEHLINGSCHEN METHODEN. WOLFLINGER. (Inaug.
Diss., Marburg, 1895, *Cbt. f. G.*, 1347.)

The author's statements on the results of the ordinary methods by means of douches, bougies, &c., do not claim any particular attention ; he mentions, however, as others have done, that with the occurrence of the fever the pains become more regular and from that time the labour, even if previously tardy, makes rapid progress.

It was found by using the Barnes-Fehling rubber-bags that in all cases, without exception, pains occurred after the introduction of the tampon. In general, when the pains commenced immediately after the introduction the labour was quickly concluded. The duration of labour amounted on the average of 34 available cases to 79½ hours ; in cases where the tampon alone brought it on, to 46½ hours. Of accidents to the mothers, excoriation of the vagina occurred

in two cases and slight uterine hæmorrhage in another. Turning was not adopted as a principle. Twelve of 24 children were born head presenting, of which 3 were perforated; of 34 children 6 were dead ($17\frac{2}{3}$ per cent.) 28 alive = $82\frac{1}{3}$ per cent., but many of these died soon, p.p.; 17 = 50 per cent. left the hospital alive. The method has evident advantages.

J. J. M.

CONTRIBUTION TO THE PATHOLOGICAL ANATOMY OF PUERPERAL ECLAMPSIA. Dr. PELS LEUSDEN. (*Virchow's Arch.*, cxlii., 1, s. i., 1895, *et Schmidt's Jahrbch.*, B. 249, 1 s. 57.

Leusden arrived at the following conclusions, based on his observations of two cases of eclampsia:—

- (1) No infectious origin existed.
- (2) In any case the cause is a poison circulating in the blood.
- (3) Nephritis must be considered as outweighing in its importance all other organic disease. In one of his cases there was a complication of double ureters on both sides. The outlet of the two lower ureters communicated with the bladder by separate entrances. The right upper ureter ran into a pocket-shaped sinus in the posterior wall of the bladder, and there seemed to be a small secondary opening into the trigonum.
- (4) The nucleated cells, first discovered by Schmorl, and also found in the lungs in Leusden's cases, are identical with the placental giant cells, whether they are derived immediately from the villous epithelium, or merely from the epithelial forms, appearing in the serotina.
- (5) Their appearance is, however, not looked upon as either the cause or the result of eclampsia and other conditions of puerperal convulsions. Embolism from placental cells is only considered to be an accidental occurrence. (Leusden found placental giant cells in two lying-in women who had died, but not from eclampsia.)
- (6) No coagulated stimulating influence was shown from these elements.

(7) In Leusden's cases no sign was found of diseased placenta, which, according to Schmorl, is a possible origin for other coagulated stimulating toxic substances.

(8) No embolism was found in the hepatic cells.

(9) Certainly in both the cases under observation the extremely insignificant necrosis of the parenchyma of the liver could not be considered as the cause of eclampsia.


(10) In any case the hyaline capillary thrombosis of the lungs and liver is only a secondary change, probably resulting from a definite toxic (uræmic?) condition, and not peculiar to eclampsia.

(11) Hyaline thrombosis in the lungs seems to be closely related to the appearance of œdema of the lungs, and to hyaline coagulation in the inner surfaces of the alveoli.

(12) It was not possible to prove whether these coagulations originated in fibrinous changes of the desquamated alveolar epithelium or not.

PREGNANCY AND LABOUR AFTER FIXATION OF THE UTERUS. By MACKENRODT. *Monatschrift f. Gyn. u. Geb.*, T. ii., Vrtach, 1896, No. 1.

Mackenrodt describes two cases of pregnancy and birth after fixation of the uterus, ventrally in one case, and vaginally in another. In both cases labour could not be terminated without operative interference. In the second case this consisted of removing the fixation sutures, and in the first the os was dilated and podalic version performed, during which the fixation sutures were torn away. Considering these cases, and comparing them with similar cases, of other authors, Mackenrodt comes to the conclusion that suture of the fundus of the uterus to the vagina by the extra-peritoneal method can no longer be thought of in those cases where there is any possibility of future pregnancy. In mobile retroflexion it is only possible to fix the uterus vaginally when the peritoneum is opened as described by the author (*Berliner Klinische Wochenschrift*, 1894, No. 31, p. 713), and this is no easy operation.



He finally makes the following observations on the disadvantages of extra-peritoneal vaginal fixation of the fundus of the uterus :—(1) Cicatricial union formed by this method between the uterus and vagina too strong and but little or not at all extensible. (2) It permanently fixes the uterus in an abnormal position of ante flexion, causing application of the bladder to the posterior surface of the uterus. (3) Normal course of pregnancy and labour is only possible after undoing of the fixation and freeing of the uterus from its unnatural position; otherwise abortion takes place, or grave disturbances in labour—laceration of the vagina and uterus. (4) Relapse of retroflexion occurs even without pregnancy, and still more often after it and labour; so that the operation does not even secure its aim. (5) The Fallopian tubes are deflected from their normal angle and frequently become painful; from this may follow some hindrance to conception. (6) Non-mobile retroflexions are better treated by ventral fixation, during which it is easier to separate adhesions, and there is less danger of consequent bleeding or suppuration.

Vaginal fixation of the uterus with opening of the peritoneum has, according to the author, the following advantages :—(1) The fixation by this method is peritoneal, sufficiently durable to hold the uterus for a long time in a position of anteversion. The peritoneum covering the bladder allows the normal mobility of the uterus without destruction of the adhesions. (2) The uterus is in a normal position; the position of the bladder also becomes normal in time. (3) Normal course of pregnancy and labour is obtained without separation or elongation of the adhesion, thanks to the accommodation of the peritoneum. (4) Relapses occur only exceptionally, and these may be avoided by the use of a pessary for a time after delivery. (5) Possibility of conception not only is not lessened, but, owing to the preservation of normal conditions, is increased. (6) This method is not suitable for fixed retroflexion.

FRED EDGE.

NOTES AND NEWS.

DR. LEITH NAPIER has agreed to accept the office of Senior Surgeon, Gynæcologist, and Lecturer on Clinical Surgery and Gynæcology at the Adelaide Hospital, South Australia.

There have been differences of opinion between the Colonial Government and the Honorary Medical Staff of the Hospital.

The Government have considered that a little transfusion and change is advisable.

A small section of the English medical public, supported by one influential journal, has adopted the *rôle* of official sympathisers with the Staff, who voluntarily resigned, on somewhat scanty information.

The appointment of men of the stamp of Dr. Leith Napier and his physician-colleague, Dr. Ramsey Smith, B.Sc., will do more to restore peace and harmony than anything else.

In consequence of Dr. Leith Napier's removal from London, several coveted appointments will fall vacant.

INTERNATIONAL PERIODIC CONGRESS OF GYNÆCOLOGY AND OBSTETRICS.—Mr. J. H. Targett, F.R.C.S., of the Samaritan and Guy's Hospitals, has been appointed as Secretary for Great Britain and Ireland in succession to Dr. Leith Napier. The arrangements have been all well brought forward, and the prospects of success of the Congress are assured.

THE RETIRING EDITOR OF THE JOURNAL.—At the meeting of Council of the British Gynæcological Society, a special vote of thanks was proposed, and carried with acclamation, to the effect that the best thanks of the Council should be given to Dr. Leith Napier for his services as Editor of the journal. It was also resolved that the formal vote of thanks should be engrossed on vellum, for presentation to the retiring Editor.

L'ENVOI.

When the Council of the Society honoured me, now nearly three years ago, by asking me to accept the office of Editor, I did so with a due sense of responsibility, and with every ambition and resolution to do the best work possible to raise the journal to a foremost place amongst medical quarterlies.

To say one word of its evolution would savour so much of self analysis and introspection (for my journal has been no little part of my life) that there would be much risk of my being misunderstood. This, however, I may say—that the success which has been, I venture to think, properly and justly admitted, has been in great measure due to my having been most ably and generously supported by some of the best read and most competent literary gynæcologists at home and abroad as collaborators.

The alterations I have from time to time made I take all responsibility for. The Council and the Journal Committee have treated me with the utmost confidence, and allowed me every freedom. I desire to acknowledge such kindness most fully and gratefully.

I suffer many personal regrets in quitting my Editorial chair; I have loved the work, and though at times it has not been easy to devote sufficient attention to all my various occupations without “lengthening my days,” in accord with Tom Moore’s advice, by “stealing a few hours from the night,” it is indeed true that “the labour we delight in physics pain.” To my readers all over the medical world of letters, who have so indulgently received my work, I would now say “Au revoir.”

I shall hope from my new home in the Antipodes, to be privileged for many long years to come to still strive to prove, if no longer as Editor, as a willing collaborator, that “the pen is mightier than the sword.”

My friends, farewell. The last word is indeed hard to say. I feel proud and happy in believing that I quit my honourable office having made a real improvement in your Journal, having widened my large circle of friends, and conquered the prejudices of not a few critics.

The world is small, and many of you I may see again. Whether this be so or not I shall always cherish the bond that has existed as one of the most enduring I have ever made.

Again farewell.

LEITH NAPIER.

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BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, MAY 14, 1896.

C. H. F. ROUTH, M.D., VICE-PRESIDENT, IN THE CHAIR.

PRESENT : 21 Fellows and Visitors.

Joseph Lockhart Downes, M.B., C.B. (Glasgow), 271, Romford Road, was elected a Fellow of the Society.

SPECIMENS.

UNRUPTURED TUBAL GESTATION, CONTAINING FŒTUS OF ABOUT SIX WEEKS' DEVELOPMENT. By F. F. SCHACHT, B.A., M.D.Cantab.

History.—Mrs. K., aged 28, married three years; has had one child, now two years old, and no miscarriages. She went to join her husband, who was staying in Constantinople, in July, 1895. In August following had some pain in left inguinal region extending down to thigh. In October had first bout of sharp pain in mid-abdomen, with bearing down, necessitating her going to bed for three or four days. Later in October a second bout similar to preceding. In November

she had a third bout similar in nature, which also necessitated her staying in bed for four days under medical supervision. These bouts of pain occurred quite irrespective of the periods, were accompanied by vomiting, and occasionally by pain in back as well as in the localities previously mentioned. She was brought home to England in December, 1895. On her arrival just before Christmas, she had a fourth attack of pain of the same nature as the others. As regards the catamenia she was *always* regular, every four weeks; the period lasted eight days; loss was free. In November, 1895, that is, about the time of the third attack of pain, there was a modification; the period lasted eleven days, but the loss was less than usual in quantity. In December, 1895, there was no show of any kind. She never missed before except in her former pregnancy.

I first saw her on January 8. Examination *per vaginam* discovered general tenderness; uterus small in normal direction; right fornix free. To left of uterus was felt a rounded, very tender mass, separable from uterus, while a much smaller mass lay in Douglas' pouch. No pulsating vessel could be felt. The larger mass appeared to be about the size of a bantam's egg, and was diagnosed as a dilated tube; the smaller was thought to be the ovary. Very considerable tenderness and thickening prevented detailed manipulation. She was sent home to bed at once and watched. On January 15 (one week later), period commenced; the loss was as usual. There was no pain, the loss continued till the 22nd (eight days). During this time, as all through the illness, the temperature was normal. On January 23, 1896, Dr. Travers very kindly examined her with me. The tenderness and resistance were so much less that bi-manual examination was easy. The dilated tube was found to be distinctly larger in size and slightly mobile. The smaller lump was as before. With the assistance of Dr. Travers and Dr. Patterson I operated six days later, and removed the left dilated tube and ovary as seen in the specimen. The operation presented no special features beyond the fact that there were somewhat

extensive but recent adhesions to be torn through. The patient made an uninterrupted recovery.

Mr. Wood Smith, of St. Bartholomew's Hospital, has reported upon the specimen, and Dr. Kanthack has most kindly also examined it and confirmed the report, which is as follows :—"The specimen consisted of the left ovary and left dilated tube, and part of the broad ligament. The left tube was distended, forming a swelling about the size of a hen's egg. On section this mass was found to consist of old and recent blood-clot, in the centre of which was a small sac, which also contained blood-stained fluid and a foetus (about the sixth week) attached towards the outer part of the sac, near the fimbriated extremity. Fimbriae were well seen. Left ovary contained a cyst on its posterior surface; no corpus luteum seen. Microscopic section showed blood-clot (mostly degenerated), and traces of chorionic villi undergoing mucoid degeneration."

It is interesting to note in this case that the history was an unusual one for an extra-uterine gestation. There was no modification of the catamenia till November, about the time of the third sharp attack of pain. The December period was missed, but in January the usual loss occurred. The pathologist's report, when taken in conjunction with these facts, would seem to show that there was a hæmorrhage into the tube on each occasion that there was an attack of pain. But these hæmorrhages did not apparently obliterate the lumen of the tube, seeing that the size of the foetus corresponded with the catamenial history, and would suggest that the patient became pregnant of this foetus in November, *i.e.*, after her third attack of pain. At any rate, from a surgical point of view, the case is instructive as showing once more that the fact of a patient's having successfully tided over several suspicious bouts of pain must not be taken as presumptive evidence of the destruction of all chances of further developments in the tube.

Dr. ROUTH asked if any indication of decidua were present at the time of the periods.

Dr. HEYWOOD SMITH said it would be interesting to know whether the decidua gave any idea of the duration of the pregnancy, for this might have been of earlier date, the growth of the foetus being retarded by the repeated hæmorrhages. The latter were otherwise difficult to explain. It was also difficult to understand why the hæmorrhages did not seal up the tube. He would throw out as a suggestion, to explain the recurrent menstruation in these cases, that perhaps the hæmorrhage into the tubes disturbed the menstrual cycle and brought on the flow apart from ovulation.

Dr. MANSELL MOULLIN observed that it seemed to be a case of tubal abortion, the blood having been effused into the tube, causing dilatation.

Dr. SCHACHT, in reply, said there was no history of decidua being passed. The attacks of pain occurred in August, October and November, but the only period missed was in December. Messrs. Kanthack and Smith, who had examined the specimen, reported that there had been a succession of hæmorrhages. Still, it was possible that the pregnancy dated from August, but in that case it was curious that no period should have been missed till December. There were not many cases recorded of unruptured tubes found containing a foetus. He operated because the swelling was increasing in size, and because the irregularity of menstruation, together with the presence of the swelling, constituted a *prima facie* presumption of the existence of extra-uterine gestation.

The CHAIRMAN nominated a Sub-Committee to examine and further report on the specimen, consisting of Drs. Schacht, Heywood Smith and Mansell Moullin.

MULTILOCULAR CYST OF GREAT OMENTUM.

By Mr. F. BOWREMAN JESSETT, F.R.C.S.

Mr. JESSETT said he showed this specimen, as he thought it was one of some clinical interest. The case before operation was thought to be one of ovarian cyst, with a long

pedicle; but on opening the abdomen and lifting out the cyst, it was found to be attached to the upper part of the great omentum and apparently between its folds. The cyst was enucleated, and the pedicle tied close to the transverse colon. The ovaries were examined, and found to be quite normal. The contents of the cyst contained a quantity of cholesterin and were highly albuminous, becoming quite solid by heat. The patient, who had been operated on only four days previously, was doing well. Mr. Jessett said he thought perhaps the chief interest of this case consisted in its rarity. On looking up the English literature, he could only find five cases recorded, one by Dr. Gooding in *Lancet*, Feb., 1887. In this case Sir William Jenner and Sir Spencer Wells saw the patient, and thought it was ovarian with long pedicle. This patient was successfully operated on by Dr. Gooding. Dr. Crosby, in 1883, records another case, and Dr. Waldy a case of suppurating omental cyst, in *Lancet*, 1889, and Sir Spencer Wells has also recorded a case. The question had passed through Mr. Jessett's mind, whether this was a true omental cyst, or a vagrant ovarian cyst, which had taken root at the base of the omentum. The argument against this was, that the large vessels passing round the entire cyst came direct from the omental vessels. The patient made an uninterrupted recovery.

The CHAIRMAN nominated a Committee, consisting of Messrs. Jessett and Plummer and Dr. Heywood Smith, to examine and report upon the specimen.

THE TREATMENT OF CARCINOMA OF THE UTERUS, CERTAIN FORMS OF OVARIAN DISEASE, AND FIBROIDS OF THE UTERUS, BY MEANS OF THYROID, PAROTID, AND MAMMARY GLAND THERAPEUTICS. By ROBERT BELL, M.D., F.F.P.S.G., Senior Physician to the Glasgow Hospital for Diseases Peculiar to Women.

From the fact that disease is incompatible with health, it naturally follows that where disease has taken possession


of a structure there must have previously existed an enfeebled condition of the parts affected, or possibly a weakness or faulty action of a distant organ upon which that immediately affected is dependent for its healthy activity, either due to some reflex or other action which is not quite understood. If a person is in possession of perfect health, and all his functions are acting in accordance with this condition, then the resisting power of that individual against disease is at its acme, but if some depressing influence is brought to bear upon him as a whole, or upon a particular organ or organs in particular, these, as a natural consequence, are rendered liable to become a prey to disease. For example, a person may one day be in the possession of the most robust health, and on the following, by the depressing effects resulting from prolonged exposure to cold, be completely placed *hors de combat*. This exposure doubtless depresses the vitality of the heretofore robust and healthy individual, when he is rendered liable to become the subject of disease, varying in type. Then again, the health may be depressed by a continuous inhalation of poisonous gases, which produces a similar effect. Hence, on the one hand, the system may become prone to pneumonia, bronchitis, or various other inflammatory conditions, while on the other, we find the body is converted into a nidus for the development of the virus of zymotic disease. Now it cannot possibly be averred that the presence of the germs did not exist in the economy prior to the vitality having been reduced by the influences mentioned, and the only conclusion we can come to in the circumstances is, that the inherent vigour of the healthy man was sufficient to withstand the onslaught of these germs whilst his health remained intact; whereas in the other case, when this had been reduced by the one cause or the other, the vitality of the germs having attained a potency—the more powerful of the two—was thereby enabled to effect a successful invasion. From what we know of the history of these disease-producing entities, we are forced to the conclusion that they are ever present, both without and within

our bodies, and are only waiting their opportunity to enable them to assert their power for evil and take action when the occasion arrives.

It is not, however, my intention to go into the pathogeny of specific disease, but to confine myself to the relationship of certain organs which exert a potent and incomprehensible influence upon distant structures. It is quite evident that when local disease commences in an individual, the organ which it takes possession of must have departed from the healthy standard prior to this. Moreover, it is not unreasonable to infer that the weakened condition of the organ affected may have been influenced by a morbid or functionally altered state of an organ in close physiological relationship. That is to say, the functions of the one part of the body are so dependent for their healthy condition to the influence exerted upon them by other organs, that when the latter cease to exert their normal activity the evil consequences upon the constitution at large are not always apparent in the structures themselves, but are manifested in a pathological condition of other parts. For example, we have learned from recent experience that the healthy condition of the skin, mucous membrane, and connective tissue subjacent to these, is dependent to a very considerable extent upon a peculiar action of the thyroid gland. Hence, we have myxœdema occurring where this gland is incapacitated from performing its normal functions. Now, basing my reasoning on this and other similar coincidences, for a considerable time I have been devoting my attention to certain diseases of the female pelvis, and, judging from the beneficial effects which thyroid extract exerts upon the epithelium of the skin when psoriasis—even of an aggravated type—is present, I was led to infer that it might possibly be due to the absence of some obscure catalytic influence of this gland that epithelioma was enabled to take possession of the mucous membrane of the cervix uteri, seeing that the disease invariably commences in the epithelial layer of the mucous membrane. From this fact, and inferring that the

thyroid gland would seem to exert a special influence upon the healthy functional activity of the epithelium, both of the skin and mucous membranes, I was naturally led to conclude that, as it acted so beneficially in psoriasis, it might be equally useful in the treatment of an unhealthy condition of mucous surfaces. While basing my argument on these lines, it must be conceded that an unhealthy condition of the thyroid does not necessarily, or invariably, give rise to epithelioma, yet in my experience it is frequently—nay, almost invariably—accompanied by an excessive metrorrhagia, showing that the function of this gland exerts some potent influence upon the lining membrane of the uterine canal as well as that of the cervix. Now, it is not at all a common occurrence for epithelioma to attack the cervix uteri if this portion of the organ has been uninjured immediately prior to the invasion, and is otherwise in a normal condition. If, on the other hand, it is suffering from the effects of any lesion, such as laceration or hypertrophy due to long-continued endometritis, then it would seem that this unhealthy state of the parts acts as a strong predisposing cause, not only to epithelioma, but to affections of a less virulent type. It seems also conclusive, from the experiments which I have made, that the exciting cause exists in an abnormal condition of the thyroid. Our duty, therefore, in every case where the uterus shows evidence of disease, however benign this may appear to be, is to endeavour to restore it to its normal condition, and thus remove what may be justly considered the predisposing cause to malignancy. The notes of cases which I subjoin will go a long way to prove the correctness of this theory.

Then it would appear that the parotid gland exerts a most powerful influence upon the ovaries. Whether disease of the ovaries is super-induced by any lack of influence of the parotid I am not in a position to judge, but this I can vouch for, that when disease does exist in the ovaries, this can be brought under subjection by the administration of parotid glands of healthy young sheep, calves, and pigs.



Then, again, it is also beyond dispute that fibroids of the uterus, as well as hyperplasia and flaccidity of the organ, can be most beneficially affected and brought under subjection by the employment of mammary glands of healthy animals. I have also ascertained that disease of the ovaries is beneficially influenced by the administration of mammary gland.

There seems, therefore, to be a considerable field for observation in the treatment of these diseases by means of glands which bear a physiological relationship to those which are diseased, and I now proceed to give a record of cases which I have treated by these therapeutic agents.

Besides the following cases of carcinoma of the cervix, which I have treated by means of thyroid elixir and palatinoids, a number which have attended at the outdoor department of the hospital have passed from under my observation, as they failed to report themselves when their symptoms were alleviated. I am, therefore, unable to give a complete report of these, and will confine myself to those private cases which I have kept under constant observation.

The first patient that I gave thyroid elixir to was Mrs. M., aged 48, who came to me in the summer of 1895, complaining of constantly-recurring floodings alternating with a copious purulent and offensive discharge. On making a vaginal examination a cauliflower excrescence was brought into view. This I removed by curetting, and applied fuming nitric acid to the raw surface. She commenced to take a teaspoonful of Allen and Hanbury's thyroid elixir three times a day, and this she continued for three months. By this time all discharge had ceased, and her general health was much improved. I saw her on February 18 of this year, when, with the exception of a small slough that had come away, accompanied by the discharge of a little blood, she told me that she had had no evidence of disease. As the uterus was somewhat enlarged, and the stomach was evidently being upset by the long-continued use of the thyroid elixir, I put her upon the elixir of mammary gland,

which she continued with the same frequency and dosage for some time. I saw her again on April 21, when she informed me that a considerable slough had come away, but this was unaccompanied by any discharge whatever, and, although she was complaining considerably of weakness, she had no symptoms of local disease, and her intention was to go to the country for change of air.

Mrs. G., aged 65, was sent to me by Dr. Donald, of Paisley, on December 10, 1895. She was suffering at the time from a copious discharge of foetid pus, but she had suffered from repeated attacks of severe hæmorrhage, and was quite cachectic. Epithelioma had made considerable inroad upon the cervical tissue and extended considerably beyond the cervix. As much of the diseased tissue as could be safely acted upon by the curette was removed, and a stick of chloride of zinc inserted within the canal. She was ordered to take a teaspoonful of thyroid elixir three times a day, and was sent home at the end of a week. Within a few days of her return she was seized by a severe flooding, which Dr. Donald had some considerable difficulty in checking. Since then, however, she has had no more return of discharge of any kind, and at the present time there is no trace of disease remaining. The following notes have been sent me within the last few days by Dr. Donald : " Mrs. G., Paisley, aged 65. Enjoyed remarkably good health all her days ; in fact, until the recent illness, never had a single day in bed, except during confinements. She first menstruated when she was 15 years old, and was always regular. She was married at the age of 25, and has had ten natural confinements, all her children being alive. Her last child was born when she was 49 years of age, when she made an excellent recovery. This labour was as natural as any. The patient never again menstruated. The first evidence of her recent illness beginning was four and a half years ago, when she complained of a hot burning feeling in her external genitals and vagina, and great pain on micturition. These symptoms gradually got worse, but became

greatly aggravated by severe backache, so much so that she could only walk with difficulty. About eighteen months ago the slight discharge which she had with the foregoing symptoms became increased, more purulent in character and at times bloody. I saw Mrs. G. early this year, and since that time have had frequent opportunities to observe her various symptoms. The discharge being very free, she had lost considerably in weight and strength. Since she was under treatment by Dr. Bell the discharge has entirely ceased ; she is free from all pain and discomfort, has gained in weight, and consequently strength ; in fact, she says she feels now perfectly well. Signed, Arch. Donald."

Mrs. M., aged 31, suffering from carcinoma of the cervix ; has been taking thyroid elixir for over two months, and had ichthyol tampons applied twice a week during the whole of this period. All symptoms of malignancy have now disappeared, and the health of the patient is better than it has been for years. She is still taking the thyroid elixir and continuing the use of the tampons. Dr. MacGregor reports on this case on April 17, and states : "The cervix appears healthy with the exception that there is a very slight trace of erosion on the under lip, also a little mucous discharge, but very small in quantity."

Miss D., aged 48, from Darlington, called upon me on November 28, 1895. She was suffering from a large fibroid of the uterus, and her object in coming to me was to have this removed. As I was interesting myself in the gland treatment of the uterus and ovaries, I prevailed upon her to remain under my observation for two months, and to take elixir of mammary gland in teaspoonful doses three times a day instead of submitting to operative treatment. This she consented to do. She called on me on February 4, when the tumour, which before had been quite globular in shape, and would compare to a pregnancy of about seven months, was very much reduced in size, and had become quite irregular in outline. I again saw her on February 18, when she expressed herself as feeling still much better, and there

was further evidence of reduction in the size of the tumour. She had now no inconvenience from its presence and returned home. In the latter end of March I had a letter from her from Stockton, stating that she is still improving. On April 21 she came to report herself, when I found the tumour was not more than one-fourth of its original size, and it had ceased to give any trouble; in fact, she stated that she was not aware of its presence. She is to continue the mammary palatinoids twice a day.

Mrs. L., aged 33, has a small fibroid on the anterior wall. (These notes are dated January 21, 1896.) She was ordered to take mammary palatinoids, each containing five grains, three times a day. I saw her on April 2, and found the tumour had diminished considerably in size and the hæmorrhage had ceased. Her anæmic condition had also disappeared, and her general health was restored. On May 5 she called to report herself after her menstruation, and stated that although it was still in excess of what it was wont to be before she was taken ill, yet it had not given her any concern.

Mrs. McC., from Perth, consulted me on March 18. She was the subject of menorrhagia, dysmenorrhœa, and a highly sensitive condition of the uterus. I made an application of iodised phenol to the uterine canal and ordered her to take three palatinoids of mammary gland per day. On April 3 she returned and stated that all her pain had disappeared, and that the general health was very much improved. She called again after her next menstruation, and stated that the discharge was considerably less in quantity, and had not been accompanied by pain.

Mrs. T., aged 34, from Grahamstown, married eleven years, two children, the last four years old, consulted me on March 6. She was suffering from menorrhagia and enlargement of the uterus. Since then she has come in to Glasgow once a week and I have applied iodised phenol to the uterine canal and introduced an ichthyol tampon. At the same time she has been taking three mammary palatinoids per

diem. She menstruated during the last week of March, when the quantity of discharge was considerably reduced. On April 7 her general health was very much improved, and the condition of the uterus was highly satisfactory. On May 5, when I saw her last, she stated that her painful symptoms had entirely disappeared, and expressed herself as feeling perfectly well.

Mrs. O., aged 30, no family, consulted me on January 28, complaining of a hard lump in the right pelvis which caused her considerable pain, and she was anxious for me to remove it. This I diagnosed to be an enlarged ovary, probably fibroid in its nature. I agreed to the operation on condition that her husband and other friends gave their consent. On her husband coming to see me, he begged that I, in the first place, would consent to give a fair trial to medicinal measures before resorting to operation. This I readily agreed to, as I was most anxious to try the effects of parotid gland in such a case. I therefore prescribed three five-grain parotid palatinoids per diem, and she has called upon me once a week so that I could watch the case carefully, when I took the opportunity of introducing an ichthyol tampon. On February 21 her health was much improved, while the tumour was more movable, not so painful to touch, and decidedly smaller in size. She then commenced to take four palatinoids in the twenty-four hours. I again saw her on March 10, when she had just menstruated and had suffered no pain. The ovary did not seem to be further reduced, but was distinctly less sensitive to touch. Of course she is still under treatment, and her condition continues to improve.

Mrs. H., aged 50, consulted me in December, 1895, suffering from an enlarged left ovary which had attained the size of a mandarin orange. There was also a suspicious condition of the cervix. I applied an ichthyol tampon, and prescribed parotid palatinoids to be taken four times a day. On March 10, all suffering had disappeared, and the ovary had returned to almost its normal size. She has been con-


tinuing the palatinoids since, and on May 5, when I saw her last, there was no sign of disease whatever.

Mrs. M., aged 35, from Greenock, consulted me on February 25. She was then suffering from enlarged right ovary and had metrorrhagia, which continued for about three weeks. She was very dyspeptic, for which I prescribed, and also advised her to take parotid palatinoids four times a day. These she has continued with the most satisfactory results, the right ovary having attained its normal condition, and the menorrhagia has ceased.

Mrs. M., aged 36, first consulted me in May, 1888, when the uterus was large, flabby, and patulous. This was curetted on two different occasions. The right ovary and tube were also enlarged and excessively painful. During the past two years she has had ichthyol tampons applied bi-weekly with little intermission. During the summer and autumn of last year she took ichthyol tabloids regularly for four months, with the result that the tube returned to its normal condition but the ovary still remained very much enlarged and acutely sensitive to touch. On February 14, she commenced to take parotid palatinoids three times a day. On March 3 following she called to report herself, when I found the ovary distinctly smaller and less tender, but she had had menorrhagia for twelve days. On April 2 I saw her again, when the ovary was still further improved in every respect, and she expressed herself as feeling better in health than she has done for over eight years.

The following notes have been sent me by Dr. Macgregor of two cases which have undergone similar treatment :—

Maggie H., aged 19, consulted me on March 9, 1896. She complained of great pain at the beginning of, and during the menstrual flow, also pain over the right ovary, with a feeling of weight in the abdomen. She has suffered more or less for the last two years. Regular twenty-eight days type; flow lasts, however, for seven days. She had leucorrhœa, coloured discharge, and suffered from lowness of spirits. *Per vaginam* examination disclosed the following :



Tubes on both sides enlarged, swollen, and extremely tender on pressure. The ovary on the right side swollen and very painful to the touch. She has had ichthyol tampons applied twice a week, and has been taking parotid palatinoids thrice daily.

April 29.—The patient has had no pain at her menstrual periods, swelling of right ovary and both tubes much diminished, and tenderness to touch is now almost gone. Patient says she feels ever so much better.

On April 11, Mrs. R., from Fife, aged 29, came to me complaining of constant backache, leucorrhœa, pain over both iliac regions, the pain shooting down her limbs, frequent desire to pass water, and bowels constipated.

The patient looked thin, careworn, and had an anxious expression, and said that she had not felt well for eight years. She has had three children; one miscarriage. Her last confinement was two and a half years ago, labour being tedious. She has been married for ten years. She suffered from dyspepsia, slept badly, and was much depressed in spirits. Physical examination disclosed torn perinæum, lacerated cervix on left side, chronic endometritis, subinvolution, retroflexion, tubes swollen and tender on both sides, left ovary much enlarged and painful. Treatment was begun at once. Iodised phenol was applied to the uterus, which was replaced and a glycerine tampon inserted. She was put on parotid palatinoids. At the end of two weeks the glycerine tampons were changed for ichthyol tampons.


On May 9, 1896, the patient was examined. Her condition locally had undergone a marked change; the tubes were no longer tender, their congestion had markedly diminished, ovary also reduced in size, the leucorrhœa had almost entirely disappeared. The patient expressed herself as feeling ever so much better, which she looks, for she has put on flesh and looks bright and cheerful.

I have detailed these few cases, which *are not* selected, and are given as examples of the therapeutic effects of the gland treatment of the different diseases enumerated. When

we come to consider the close physiological relationship of one structure with another, and the peculiar effects of marriage on the one hand and virginity on the other, the latter rendering certain organs much more prone to disease than would have been the case had these been brought into functional activity, we are naturally led to conclude that something may be done to combat the tendency to pathological change which would seem to take place in these circumstances, so that an immense field for observation seems to be opening out and will surely repay any amount of time expended upon elucidating these recondite physiological and pathological problems.

The CHAIRMAN thanked Dr. Bell for his paper, which opened up new views of treatment for these cases. The effect of the administration of the products of some of these ductless glands was often very marked.

Mr. F. BOWREMAN JESSETT said he was interested in the account of these methods of treatment. But he thought the comparison of epithelioma with psoriasis and with myxœdema had no rational basis. He noted that in all the cases of epithelioma curetting was done, followed by the application of such strong caustics as chromic acid and chloride of zinc, and he was inclined to attribute the improvement to the use of the caustic. If Dr. Bell had recorded cases in which the thyroid extract, and nothing else, had been used, they would have been more convincing. As regards the cases of fibro-myoma, the enlargement was reduced in three cases, but he would like to ask what was the age of the patients, and what other treatment was adopted. It was well-known that some fibroid tumours were apt to diminish in size, especially after the menopause, if the patient could be kept at rest. But all the cases were too recent for the deductions to be considered as trustworthy. The cases of ovarian disease were also treated locally, by applications of iodised phenol and ichthyol tampons. It was, of course, not uncommon for erosion of the os to be associated with enlargement of the ovaries and inflammation



of the tubes, and these conditions were always found to improve under local treatment. He therefore regarded the local treatment as the more important factor in Dr. Bell's cases. No doubt, however, many would give this new method of treatment a trial.


Dr. LEITH NAPIER said he had had no experience of this treatment, but he had recently read a translation of a paper by Dr. Jouin, who in one case was treating a patient for obesity by means of thyroid extract. She happened to have a fibroid, and was under observation for twelve months. He discovered at the end of this time that the tumour had shrunk from two inches above the umbilicus to one inch above the pubes. This led him to try it in other cases. The second was a soft fibroid, and was benefited; the third was a hard fibroid, and no improvement was found. Three other cases were too recent to draw conclusions from. The recent views of the pathology of soft fibroids regarded them as associated with morbid glandular action, so it was quite possible that thyroid extract might exert an influence on them. He would ask Dr. Bell what was meant by mammary and parotid extracts. He hoped to give in an early number of the journal an account of the therapeutics of some of the animal extracts, but he did not know the composition of these two.

Dr. HEYWOOD SMITH observed that Dr. Bell did not tell them what was the condition of the cervix in the first case, at the time of the last examination, but in all the cases there seemed to have been an amelioration of symptoms in a much shorter time than they were accustomed to. As regards the cases of fibroid, had Dr. Bell tried in any case a change of treatment from one kind of extract to another? In a paper which the Chairman read before the Society some time ago there was reference to a substance called spermine, obtained from the ovaries. Had Dr. Bell tried ovarian extracts, and was there any evidence that giving this would restore the action of diseased ovaries? It would be useful also to know whether any of the cases were treated by

animal extracts alone, and what led Dr. Bell to decide which extract he should employ in any given case. In view of the results recorded in the paper he thought they should give the method a trial.

Dr. MACAN observed that in a recent paper on the treatment of bronchocele by thyroid preparations, the author stated that they were of no use in cystic bronchocele; he also found that, in the cases where a good result was obtained, the English preparations were much more active than thyroidin.

Dr. BELL, in reply, said he thought Mr. Jessett was under a misapprehension in supposing that he compared epithelioma to psoriasis and myxœdema. It was rather that in view of the action of the thyroid extract on the epithelium in cases of psoriasis, and on the epithelium and subjacent tissues in cases of myxœdema, it seemed to him that it might have an action on the epithelium in carcinoma, for probably epithelioma was at first a benign disease, remediable by medical measures, if the cause of irritation could be removed. Mr. Jessett also thought that the curetting and caustics might have caused an improvement without the thyroid treatment, but he had tried both of these in many cases, and had never had the same satisfactory results as he obtained from the thyroid extract, and since he began the treatment it had not been necessary for his hospital patients to return to him so often. He had often been disappointed in the effect of the menopause upon fibroids, indeed, he had never known it to act beneficially. The reason he used mammary gland extract for fibroids was that the uterus and mammæ sympathise with each other; and he gave parotid extract in ovarian disease because physiologically these organs were related, as was shown by the frequency of metastases between the two. Others had now been using this treatment for some time, and had been very pleased with the results; in one of his cases there was no other treatment adopted. He had not tried ovarian tissue. He felt sure that those who tried the method would be satisfied with the results.



BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, JUNE 11, 1896.

CLEMENT GODSON, M.D., PRESIDENT IN THE CHAIR.

PRESENT : 27 Fellows and Visitors.

SPECIMENS.

TWO SPECIMENS OF UTERINE FIBROID REMOVED BY
HYSTERECTOMY. By R. O'CALLAGHAN, F.R.C.S.I.

- (1) A fibroid, which rose as high as the umbilicus, was removed on account of profuse hæmorrhage and pressure symptoms. It was a simple straightforward hysterectomy; the *serre-nœud* was removed on the seventeenth day, and the patient made an uninterrupted recovery.
- (2) A large fibroid of uterus—complicated with a large outgrowth opening up the left broad ligament and a smaller one between the uterus and bladder. The enucleation of the latter caused alarming hæmorrhage, necessitating the retention of the elastic ligature on the stump below the wire *serre-nœud*; both ligature and *serre-nœud* were removed on the twelfth day. The patient made a good recovery and left the home in six weeks.

In answer to questions by Drs. Routh and Heywood Smith, Mr. O'Callaghan added that the diagnosis of the outgrowths in the second case was made before operation. The pedicle was rather low down, and to remove the elastic ligature he seized it on each side of the knot with forceps, and cut the knot.

TWO CASES OF TOTAL EXTIRPATION OF THE UTERUS FOR CANCER. By J. MACPHERSON LAWRIE, M.D., Physician to the Weymouth Sanatorium.

Case I.—The patient, aged 52, complained of continual bearing-down, severe abdominal pain, a brownish discharge, and loss of flesh. The uterus was in good position, and quite mobile, but large. The os gaping, and the cervix rough and bleeding readily. The sound passed three inches. A section of the cervix was sent up to the Clinical Research Association, who reported that the specimen consisted of cancerous tissue, and vaginal hysterectomy was performed. The cervix was much infiltrated with disease, and tore away from the fundus early in the operation, and owing to the friable nature of the uterine tissue, no traction could be exerted. The uterus was accordingly retroverted by firm pressure over the pubis, after the peritoneum had been opened, and the fundus drawn down with a pair of strong forceps. The broad ligaments were transfixed and ligatured in several portions and divided. Rather free bleeding during the course of the operation obscured the parts a good deal, and at one stage the bladder was unfortunately laid hold of and torn, after it had been completely separated from the uterus, and a large vesico-vaginal fistula resulted. After free douching, the vagina was packed with iodoform gauze. The patient suffered from much exhaustion, and a week after the operation her extreme weakness gave rise to some anxiety. She was kept going with rectal feeding and subcutaneous injections of morphia and strychnia. Morphia is not a popular drug after operations on the abdominal organs, but in this case the combination was followed by the most gratifying results, and probably saved the patient's life. Five weeks after the operation the bladder was examined. The finger, *per vaginam*, could only just reach the fistula, which was situated high up, and was about 2 inches in diameter. With a small vagina this was a troublesome complication. The adhesions were broken down, and with one finger working in the bladder and helping the other in

the vagina, the edges were pared and brought together with numerous silver sutures, and the rent completely and successfully closed. The patient is now, ten weeks after the operation, quite well.

Case II.—Mrs. M., aged 49, came, complaining of gradual loss of health and strength, and constant severe pain round the back and in the abdomen for the last four months. She looked ill and worn, and her appearance at once suggested malignant disease. The periods had never ceased altogether, although latterly irregular, and for the last three months she had suffered from almost continuous hæmorrhage and much offensive leucorrhœal discharge. The uterus was found greatly enlarged and freely movable. The cervix was partially destroyed by deep ulceration, which extended for a considerable distance laterally on either side. Vaginal hysterectomy was performed. The right tube and left ovary presented in the wound, and were also taken away. The difficulties of the operation were increased by a quantity of omentum which slipped down through the vagina, and was only retained in the abdominal cavity by a large plug of iodoform gauze, which was not removed until the seventeenth day.

The after-progress of the case was quite satisfactory, the patient making an excellent recovery.

Dr. SHAW asked whether the bowels had been opened before the morphia was given in the first case ?

The PRESIDENT observed that it was an interesting point in the first case that the disease had existed two years, and that the uterus was still freely movable.

Dr. MACPHERSON LAWRIE said he could not quite remember whether the bowels had been opened before the morphia was given, but flatus had been passed. The effect of the combination of strychnine and morphia was very striking, although the collapsed condition lasted for a week, during which time she was fed by the rectum.

ON SOME PSYCHOLOGICAL CONSEQUENCES OF SUPPRESSED MENSTRUATION. By FANCOURT BARNES, M.D., F.R.S.E., Consulting Physician to the British Lying-in Hospital.

It is a matter of common experience that the suppression of the catamenia is likely to evoke various symptoms indicating disturbance of the patient's general health. Suppression of the catamenia may be premature, or occur at the natural epoch of the change of life. In either case the results may be harmless or the reverse. In either case the mind may be affected. It is a curious clinical fact that the mental disturbances should be much more frequent at the natural period of the climateric, than when the menstrual function is suddenly inhibited by accidental causes. Normal menstruation may be described as the monthly discharge of a moderate quantity of sanguineous fluid without pain, in physiological response to the periodical ovarian nisis associated with the maturation and escape of an ovum or ova.

The fluid consists mainly of blood; it contains also more or less mucus, and epithelial scales cast from the decidua menstrualis. One characteristic of the blood is that it does not readily coagulate. The menstrual nisis may be regarded as analagous to gestation. It is clear that such a process cannot be inhibited without distress and danger in various directions. One of these is tidal wave of high and low tension in the pulse. The high tension preceding, the low tension succeeding, the menstrual wave. In a paper on the "Indications afforded by the Sphygmograph in the Puerperal State," which I read at the Obstetrical Society of London in 1874, I showed the analogy between menstruation and gestation, with regard to vascular tension, by tracings of high tension during the days preceding menstruation and preceding delivery, and tracings of low tension succeeding menstruation and parturition.

In a paper in the *American Journal of Obstetrics*, January,

1882, I further demonstrated the rise and fall of vascular tension in menstruation. In a case of hernia of the ovary, I found that the sphygmographic tracings coincided with the vascular congestion preceding, and the low tension following menstruation. I refer to the vascular tension in connection with menstruation, because it undoubtedly plays an important part in the case I shall relate. My chief object in this sketch is to draw attention to the psychological changes which may arise, in some cases, from the suppression of menstruation by causes other than gestation. The case in hand is a striking one and exemplifies the serious danger of disturbed menstruation.

Miss S., aged 27, consulted me in May, 1895. She had first menstruated at the age of 16, and had continued to do so punctually and naturally until a year before she saw me. Her sister who accompanied her stated that she received a great shock from the death of her father, whereupon menstruation ceased. Two successive attacks of influenza assisted the depression from the original shock. From the time that the menstrual functions ceased she gradually became more and more weak-minded, until her condition was not much above that of an imbecile. Her everlasting ejaculation and plaint was: "Oh, my head!" Her physical condition was also distressing. Her legs were swelled, and the abdomen was also distended by flatus. The eyes were distended and prominent as in exophthalmos. Her sister stated that during the fifteen months or so that she did not menstruate, she had seen several medical men and had undergone the routine medical treatment in such cases with no relief. As she was virginal I advised an examination under chloroform so that surgical treatment might follow upon the track of diagnosis if necessary. As the os uteri, without being unduly contracted, was by no means well developed, I thought it best to divide it bilaterally. This I did in the triple hope of physically exciting the uterus, of relieving the intense state of congestion, and of securing a more spacious entrance for subsequent intra-uterine treatment. Having divided the

cervix I made an intra-uterine application of tincture of iodine. After this I applied tincture of iodine to the endometrium twice a week for three weeks. At the end of one month from the day of operation the menstrual function was re-established. The menstruation was painless and there was a free flow of blood.

From that day forth the patient's mental and physical symptoms began steadily to disappear. She came to me to report herself some months after as being perfectly well. A case like this shows the importance of surgical treatment in obstinate conditions of the uterus. The uterus usually yields to local treatment. Here drugs had failed. This patient was drifting into an asylum for the insane, where she would most probably have remained for life, had not her friends consented to the surgical treatment I have described.

Dr. LEITH NAPIER said he had seen such cases as that recorded in the paper. One was a young single woman, in whose case sudden arrest of menstruation followed a chill. Just before the period was due, she suffered from severe neuralgia, which was followed by total blindness. Examination of the eyes revealed no lesion there. In a short time the blindness passed off, and then the period came on, after which she menstruated regularly. He had seen milder cases since. He thought Dr. Barnes' argument was a sound and proper one, and received support from a case in which he removed the appendages for disease. She went on menstruating for two and a-half years, and then, as the loss became excessive, he curetted the uterus. The period at once ceased, and the symptoms of the menopause came on so seriously that he ordered her an emmenagogue. This brought on the flow again, and the symptoms disappeared. To test the point further he told her to leave off the medicine; once more the periods ceased, and the symptoms returned.

Dr. ROBERT BARNES said the case was a good illustration of the relation between menstruation and the nervous system. The health of a woman was associated with menstruation.

which was to be regarded as a missed pregnancy ; and if she were prevented from menstruating or conceiving, harm followed. In a paper before the Society some years ago, he dwelt on the relation of menstruation and insanity. If the present case had got into an asylum, he believed she would have remained there ; for he thought it was a great fault in the organisation of our asylums that there was no provision for the examination of such cases ; in some few cases in which he had been called in, he had been able to cure the pelvic trouble, and save the patients from being permanently shut up. He regarded it as one function of the Society to convince the profession of the connection between the two conditions, and to proclaim the doctrine that it was wrong to condemn a woman to an asylum without examining her pelvic organs. This object could only be attained by bringing forward such cases as the present one. Further, not only should women be examined before being committed to asylums, but the asylum authorities should employ gynaecologists to make all such examinations. For asylum doctors were among the most absolute of the profession : and once a woman came under their care, there was a considerable chance of her remaining. He often recalled a precept which he heard in Paris in his student days : *Messieurs, interrogez tous les fonctions* ; and it had largely guided his practice since. There was no reason why a woman in an asylum, who was suffering from a uterine complaint, should not have this attended to, whether or not it made any difference to her mental condition. He hoped this case would be an argument in favour of the unity of medicine, which should show that sanity was a matter, not simply of nerves, but of response on the part of the nervous system to all the functions of the body.

Dr. ROUTH said he had seen a great number of these cases, and had noticed that through menstrual irregularities girls might get into such an intensely neurotic state that in bad hands they were almost sure to finish in a lunatic asylum. As a rule, internal examinations of the insane were

scarcely in the province of asylum doctors, and were rather discouraged. It had been his lot to see several women sent to asylums who could have got well had they been gynæcologically treated. Therefore, in the case of every woman who was thought to be insane, if there was any history of pelvic disease, an examination should be made, and she should be treated as a gynæcological case. He remembered the case of a girl at school, who began menstruating and developed symptoms of insanity. A doctor was sent for, and she was tied down to a chair for several hours. She got worse, and was sent into the asylum. Her mother took her away, and brought her to him, and he found that the whole trouble arose from menstrual irregularity. This was treated and she got quite well. There was no doubt that in many cases a mental shock would arrest or modify the function, resulting in mental derangement. He had also seen cases of a condition not described, of vaginismus of the uterus, causing much pain and mental symptoms before a period; he had cured them by anodynes and dilatation. Dr. Barnes' paper would do much good if it did nothing else but call attention to the fact that many kinds of insanity were due to suppression of the menses.

Dr. MACNAUGHTON-JONES said it must be remembered that in many cases the relation between suppression of ovulation and insanity was not one of cause and effect. They must sometimes invert the matter, for there was no doubt that mental disturbance did arrest menstruation. Nor should they too broadly impeach the heads of asylums; some of the remarks made by the previous speakers on this point were not quite just. He knew many superintendents of asylums well, and was convinced that they were just as alive to the correlation of mental and sexual conditions as anyone present, and quite as anxious to arrive at the truth of the matter, and to secure the well-being of the patients. It would be remembered that at a discussion by the Society some years ago, the lamented and distinguished physician, Dr. Hack Tuke, and others, expressed their conviction of the

importance of this relation. Dr. Barnes' case was of interest, but the connection between mental conditions and disorders of menstruation was, as far back as he could remember, widely known, and in every case of epilepsy where the patient was a young girl the first question asked was "What is the menstrual condition?" He saw a case of dementia with Dr. Hack Tuke, and had seen others also, in which the mental condition improved on the restoration of the menstrual function. The question of treatment was sometimes very difficult, for the patient's safety had to be thought of, and restraint was often necessary. He knew of one young girl who committed suicide under such circumstances. Dr. Barnes' remarks about high tension were interesting, and this high tension might show itself in a case of other organs, such as the eye, resulting in extravasation of blood into the retina; the nose, resulting in swelling of the turbinals and epistaxis; the throat, causing aphonia; while disturbance of the newly-discovered "lingual tonsil" had lately been brought into relation with suppressed menstruation. In conclusion, he wished to emphasise the fact that the association of ovulation and menstruation had been recognised by alienists as well as gynæcologists; but it was often very difficult, with the two-fold trouble at work, to bring about a satisfactory result, and it was often necessary to put the patient under temporary restraint.

Dr. FANCOURT BARNES, in reply, said his object had been to show what surgical treatment could do in some cases which were generally regarded as purely medical. The case was, no doubt, an extreme one; and, of course, they would not wish, as a rule, to resort to surgical methods in the case of young girls. But in exceptional cases surgery should be called in. He had had similar good results from surgical intervention in cases of dysmenorrhœa and amenorrhœa associated with sterility.

NOTE ON A CASE OF SUCCESSFUL TRANSFUSION AFTER
EXTREME HÆMORRHAGE. By EDMUND HOLLAND,
M.D., F.R.C.S., Physician to the Soho Hospital for
Women.

An ordinary ovarian operation was performed by the author, with the assistance of Dr. Oliver, on March 21, about 9.30 a.m. Two hours after the operation the house physician observed indications of severe and rapidly progressive internal hæmorrhage, and sent a special messenger for him. The patient was found pulseless, and had been so for a quarter of an hour. The wound was immediately re-opened, the pedicle re-tied, and the old ligatures removed. By this time the breathing had ceased, the jaw was fallen, the cornea sunken, the patient completely exsanguinated, and, apparently, hopelessly dead. Dr. R. T. Smith dropped in opportunely, and proceeded to maintain artificial respiration, whilst Mr. Scott Elliott, the senior house physician, rapidly and skilfully performed the operation of transfusion, Dr. Holland being fully occupied in cleansing the flooded abdomen; so that these three processes—artificial respiration, transfusion and peritoneal toilet proceeded simultaneously, with other adjuvants as elevation of the legs, brandy enemata, and artificial warmth. The liquid transfused was a solution of chloride of sodium in the proportion of one drachm to a pint of water, boiled and strained, and at a temperature, as it stood in the glass jar, of 105° F. After a pint had been introduced a faint sigh was heard, and a thready unstable pulse became perceptible; during the introduction of the second pint the pulse improved, but was still very unstable, and warmth began to return in the shrunken frog-like hands; as the third pint steadily trickled in, the breathing became regular and the pulse fuller and steadier, and by the time three pints had fully passed into the vein the patient opened her eyes, rolled her head, and had a well-sustained pulse of 108, of good volume, and was put to bed. The fluid used in washing the abdominal

cavity was a solution of chloride of sodium, and at the least a pint was purposely left in for absorption. The progress of the case was slow, but quite satisfactory; there was no peritoneal irritation, and no suppuration in either wound. The patient expressed a wish to sit up in bed on the 18th day; she walked across the ward on the 28th, and left the hospital on the 35th day, convalescent—a little weak and pale, but otherwise little the worse for her unusual experiences.

Dr. ROBERT BARNES observed that in these cases a certain volume of fluid was all that was necessary to bring about a good result; the presence of other ingredients of the blood, such as red corpuscles, was not necessary.

Dr. PURCELL said that transfusion was necessary in many cases, as in hæmorrhage into the abdominal cavity, and it was often serviceable even when there had not been severe hæmorrhage, as in cases where, by the removal of a large tumour, much blood was at the same time removed from the body.

The PRESIDENT could testify to the value of transfusion—in cases of post-partum hæmorrhage—in a case where this came on an hour after the delivery of the placenta, owing to the patient raising herself up suddenly to greet her husband. In this case a large rectal injection of salt solution was given with most satisfactory result.

*ORIGINAL COMMUNICATIONS.***NOTE ON THE ADMINISTRATION OF ANIMAL EXTRACTS AND ALLIED SUBSTANCES DURING THE MENOPAUSE.**

By LEITH NAPIER, M.D., F.R.S.E.

Senior Surgeon and Gynaecologist, Adelaide Hospital.

THE fashion which now actuates the chemist and pharmacist to devise and prepare, and the physician to prescribe, this class of remedies ; and also the tendency which exists in the public mind to ever seek after new methods of treatment, seem to me to justify an attempt to consider and appreciate the value of these remedies in treating the disorders more commonly observed during the menopause.

There is an enormous amount of literature already existent on the subject. Much of it is ephemeral, and comparatively little has yet been done to weigh the matter without prejudice.

We find that among the remedies advertised by pharmacists, and advised by physicians—cardin, cerebrine, nuclein, spermin, ovarine, nephrin, thyroidine or thyroid extract, globulin, serum injections, testicular fluid injections ; and we may also here mention anti-toxin, and with every reserve, tuberculin. In addition to these there are naja-tripudians, or rattle-snake venom, and other toxic products, and animal peptones.

I do not propose to even briefly analyse the whole of the available evidence for or against these substances. It is only so far as the question affects the main subject of consideration that I have felt it incumbent on me to attempt to estimate the propriety of exhibiting these remedies.

Premising that my personal knowledge of this class of remedy is limited to the administration of thyroid extract in

several cases, and of one or two of the others in a very few instances, I would submit rather a digest of our present knowledge, acquired from the opinions of those who have given special attention to these remedies. Dana,¹ of New York, regards the method as a rational one ; and thinks there is no more reason to doubt the value of animal extracts than there is to doubt that of vegetable extracts. He refers to the effects of thyroid extract in myxoedema, as corroborative evidence of the good likely to be derived from other allied substances.

Cardin has been strongly advocated by the late Dr. Hammond,² of New York, who has contributed various papers on the treatment of nervous conditions by these extracts. Leonhardt³ ridiculed the use of organic extracts ; and especially disputed Hammond's observations regarding the benefit of *cardin* in cardiac conditions. Hammond replied by maintaining his conclusions, and insisting upon the importance of the method of preparing the extracts. Professor Bower,⁴ of Chicago and Delafontaine, states that the active principle of *cerebrine* is nitro-glycerine ; some samples have produced "acceleration of the pulse, with feeling of fulness and distension of the head," &c., exactly the physiological effects of nitro-glycerine ; but it is said that none of these symptoms follow a dose of the extract if prepared in accordance with Dr. Hamilton's formula.

Cerebrine may be injected hypodermically, or administered in the forms of tabloids, or given as an extract. The *extractum cortex cerebri* is prepared, as its name implies, from the brain cortex of newly-killed animals, and is alleged to have a sedative and strengthening effect upon the nervous system.

Nuclein is allied to *cerebrine* ; it is, however, better de-

¹ *Boston Med. and Surgical Jour.*, May 18, 1893.

² *North Carolina Medical Jour.*, March ; *Gaillard's Medical Journal* New York, April 1 ; *Texas Health Journal*, March, 1893, &c.

³ *New York Med. Journ.*, June 1, 1893.

⁴ *Journal American Medical Association*, June, 1894.

fined chemically. The nucleins contain a large proportion of phosphorus, in the form of a nucleinic acid, with a complex base. The nucleins are believed to form the chief chemical constituents of the living part of the cell. They exercise considerable influence on blood serum as germicides; therapeutically they are injected hypodermically. Nucleins may be obtained from yeast, eggs, the spleen, the thyroid gland, the testes, &c. In tuberculous patients they cause a decrease of temperature, and may be used, at any rate, the yeast nuclein can, for many months without injurious effects.⁵

Globulin, prepared from the spleen and lymphatic glands, is an albuminoid of considerable importance. It is regarded by Hankin as of the same nature as the albuminoid existing in blood serum, which has been experimentally proved to exercise anti-bacterial and germicidal powers. Dr. Chas. Ewing,⁶ in an article on the action of rattle-snake poison, has recently summarised the knowledge, obtained from a study of the writings of Von Fodor, Nultall, Wassermann, Kitasato, Buchner, Ogata, Hankin, and others, regarding the germicidal power of healthy blood; and from these writings, especially Von Fodor's, it appears that certain chemical substances increase, while others decrease, the normal action of the blood in these relations; phosphate of sodium and the carbonates of potassium and sodium showed a very marked increase in the bactericidal power of the blood.

From Ewing's experiments, which proved that the poisons of the rattle-snake and cobra not only produce such decisive, but peculiar, effects on the human body, it may be easily understood that the idea of utilising dilute solutions of these poisons in various conditions of disease must have occurred to many. We know that the effect of attenuated poisons, or of very small doses of certain mineral

⁵ Vaughan, *New York Medical Journal*, June 16, 1894.

⁶ *Lancet*, May 19, 1894, p. 1236.

and vegetable poisons, have markedly beneficial therapeutical action. But this line of investigation has already been taken up; it seems that in India the administration of naja tripudians, the cobra poison, is not unknown as a remedy in the collapse of cholera. And both this and crotalus, the rattle-snake poison, have been administered, in diluted strengths, in yellow fever and septicæmia.⁷ Whether, in still smaller doses, these extracts would prove beneficial in anæmias and other conditions of blood deterioration, complicated by nervous depression, must be left to the determination of future investigators.

Ovarine is now made from the ovaries of rabbits, guinea pigs, sheep, and other animals, and is prepared as tabloids by Burroughs, Welcome, and Co., and other chemists. Dr. Augusta Brown⁸ treated more than a dozen of women by subcutaneous injections of ovarian juice taken from using rabbits, for extreme debility caused by age, insomnia, hysteria, uterine affections, &c. She arrived at the conclusion that "the effect of injection of ovarian juice was identical with that of testicular juice, but less powerful." A colleague informs me that he has observed flushing and signs of rise of blood to the head as the result of giving ovarine tabloids to girls suffering from amenorrhœa.

Testicular Juice and *Spermin*.—It has been alleged by Pæhl, of St. Petersburg,⁹ that the effect of Brown-Séquard's testicular juice depends on the presence of spermin, isolated for the first time by Scheiner in 1878. According to Pæhl, this substance is found in most of the other organs of the body, such as the ovaries, the pancreas, the thyroid, the thymus, and in normal blood. It acts as a ferment of oxidation on the excrementitious products of the body, especially the leucomaines, and prevents their accumulation by transforming them into substances easy of elimination.

⁷ Sandel, *Medical Age*, January 1, 1894; also v. Dr. Hayward's "Materia Medica, Physiological and Applied," article "Crotalus."

⁸ Routh, *BRITISH GYNÆCOLOGICAL JOURNAL*, part xxxvii., p. 56.

⁹ *Res. gén. des Sci. pures et appliq.*, Paris, August 15, 1893.

Chabrié, of Paris, so far confirms Paehl's view.¹⁰ He examined the urine of patients before and after treatment by testicular injections, and found considerable increase of urea after the injections, with a decrease of phosphoric acid. The diminution of phosphates was not caused by the injection of artificial serum. Jolly,¹¹ writing in the same paper, had stated that, though the injection exercised a stimulating action on the nervous system, it was only transient, and gained at the expense of a waste of the phosphates in the system.

Very wide difference of opinion has been expressed by the advocates for and against this method, not only as to its value, but as to the manner in which, if it does act, it influences the organism. Brown-Séquard denied the existence of spermin, as described by Paehl, in the testicular liquid prepared at the College of France; he likewise denied any merit to cerebral fluid derived from sheep.

Héricourt¹² compared the relative use of testicular fluid with phosphate of sodium, artificial serum, grey cerebral substance, and spermin. He found distinct dynamogenic effects after each injection of the testicular fluid—none after using the others. The patient was ignorant as to which substance was used, so that suggestion could not explain the difference.

On the other hand, V. Negel,¹³ of Jassy, who experimented with grey cerebral substance, testicular liquid, and sterilized water, concluded that in the great majority of cases the organic extracts act only by suggestion.

This opinion is supported by Massolongo,¹⁴ of Padua; Maguliani,¹⁵ of Pavia; Guelpa,¹⁶ of Paris; Bérillon,¹⁷ of

¹⁰ *Bull. Médical*, August 14, 1893, Paris.

¹¹ *Ibid.*, May 3.

¹² *Compt. Rend. hebdom. de la Soc. de biologie*, April 28, 1893.

¹³ *Bull. de la Soc. des Méd., &c., de Jassy, Roumania*, November 1, 1892.

¹⁴ *Riforma Medica*, Naples, Nos. 4, 6, 7, 8.

¹⁵ *Gaz. Med. di Pavia*, May 1, 1893.

¹⁶ *Bulletin Médical*, April 14, 1893.

¹⁷ *Ibid.*, June 4, 1893.

Paris ; and Dujardin-Beaumetz,¹⁸ the latter of whom writes : "Charcot waited in vain for the cure of a single case of true ataxia in his service. Even the exact agent of these liquids is to such a point unknown that, according to some, it is the phosphate of soda and, according to others, phosphorus. The truth is that injections of organic liquids have generally a tonic effect, but here their ambition should end."

Even Brown-Séquard, and his co-worker, D'Arsonval,¹⁹ admit that "neurasthenia was rebellious to the treatment in half the cases."

Rusconi²⁰ found no benefit from these injections in two cases of hysterical women. One of these improved after injections of chloral of gold and soda. In another case of vesical paralysis following typhoid fever, with general weakness and neurasthenia, all the symptoms disappeared after five injections of testicular fluid.

But the injection of solutions of sodium phosphate, of serum, and of other saline fluids has been equally efficacious.

Sonolli²¹ cured four cases of neuralgia, one of neurasthenia, and improved three cases of hysteria, one of latus with hysteria, one of spastic rigidity and neurasthenia by hypodermic injections of sodium phosphate. Two cases of hysteria were unaffected.

Malhiew²² agrees with writers, above quoted, who think that the treatment by saline injections owes much of its efficacy to suggestion. He objects strongly to the use of organic liquids, but thinks saline injections may be safely employed if careful antiseptic precautions are taken. He approves of small injections of serum. He has obtained "almost miraculous results" in neurasthenia with a liquid, composed of sodium phosphate one drachm, sodium chloride

¹⁸ *Ibid.*, March 19, 1893.

¹⁹ *Compt. rendus hebdom. des Sciences de l'Acad. des Sci.*, April 24, 1893.

²⁰ *Gazz. Méd. Lombarda*, June 29, 1893.

²¹ *Gazz. Méd. Lombarda*, September 16-23, 1893.

²² *Gaz. des Hôpitaux*, September 7, 1893.

half-drachm, neutral glycerine 300 grains (by weight), and two and a half ounces of water.

If what has been said as to the uncertainty, if not uselessness, of injections of testicular fluid in neurasthenia, hysteria, and allied affections is not sufficient,²³ anyone who wishes to try the remedy should refer to the formula for the preparation of the extract as given by D'Arsonval.²⁴ The fluid may also be given by rectal injection.

I do not deny the possible, nor even probable, efficacy of animal extracts in conditions of general, and especially nervous, debility; but at present there is too empirical and commercial an element in the methods of advocacy adopted by certain of their advocates, and too little substantial pathological and clinical observation to warrant us in accepting everything we may hear and read on the subject as accurate.

It is, however, different with regard to thyroid extract. Experimentally and chemically we have gained sufficient knowledge to be able to speak with more certainty regarding this. So far as I am aware, there is no satisfactory evidence as to the exact *modus operandi* of the drug. Yet in conditions of sporadic cretinism, as well as in myxoedema, and in various skin affections, especially psoriasis and lupus vulgaris, there is undoubted evidence to show that this remedy is one of great value. Lockhart Gibson (of Brisbane), Affleck Caird, Byrom Bramwell (*Brit. Journ. Dermat.*, July, 1894); John Thomson Carmichael (of Edinburgh); Robin (*Lyon Medical*, August, 1892); Vermehren (of Copenhagen); Railton Telford Smith, Colcott Fox, Schiff, Victor Horsley, Fuhr, may be cited as some of the more recent writers on the subject. Phineas Abraham (*British Medical Journal*, January 16th, 1894) has not found the same beneficial results in psoriasis as others. *The Medical Annual* (Wright, Bristol), 1895; and "The Year-Book of Treatment" (Cassell's, London), 1895; each con-

²³ Whiting and Wood, "Record of twenty-three Cases of Nervous Disease treated by Orchetic Extract," *Lancet*, February 3, 1894, p. 264.

²⁴ *Archiv. de physiologie normale et pathologique*, Brown-Séquard, January, 1893, p. 192.

tains a good summary of the effects of the thyroid extract in skin affections.

My personal experience, confined for the most part to chronic or sub-acute skin affections, occurring coincidentally with other meno-pastic disorders, affords me sufficient warrant for stating that, whether directly or indirectly, the influence of the extract is unquestionably good.

In other patients who had no skin eruptions, I have prescribed tabloids of fresh thyroid extract in doses of five or ten grains thrice daily. These cases have derived good in almost every instance. The general health and strength has improved, the nervous symptoms, especially irritability, have become less, and in one or two there has been marked improvement in the existing dyspeptic conditions. I have not made any extended trial of thyroid extract as the *only* remedy, nor do I intend to do so ; as I think one's duty to a patient in such circumstances is best fulfilled by treating the various functional symptoms with the different remedies which experience has shown us are likely to give relief. But as an adjunct to general tonic and sedative treatment, I esteem thyroid extract as a most valuable addition to our list of drugs.

Now, if this is true of thyroid extract, I think it reasonable to believe that other gland extracts, such as globulin, spermin, ovarine, and possibly nephrin (or kidney extract) *may* also be found beneficial. My experience with none of these warrants me in stating more. The deficiency of glandular substances in the economy experienced at the menopause seems to suggest that there is some lost principle, which we may therapeutically supply until the system has gradually become accustomed to effect the necessary metabolism independently. Quite recently it has been claimed that iodine salts are always present in thyroid extract, which may partly explain the effect. I would venture to add that I think the dosage by tabloids not only more convenient, but evidently equally efficacious to the hypodermic injection of these substances. It may be different when we resort to injections of alkaline salts or serum.

ON THE USE OF ANÆSTHESIA IN OBSTETRIC PRACTICE. By
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(Continued from p. 96.)

"I esteem it the office of a physician, not only to restore health, but to mitigate pain and dolours."—*Bacon.*

PART III.

THE first two parts of this communication dealt with the history of the subject, and put forth general arguments for the use of anæsthesia during labour, founded upon the severity and danger of the pains usually attending the process; the absence of any injurious effects upon the foetus were demonstrated; and a conclusion arrived at, from the requirements which obtain in most cases, that analgesia without complete loss of consciousness should be the aim of the accoucheur or of the anæsthetist who assists him. Many of those agents which at one time or another have been employed to produce anæsthesia during parturition were laid aside after trial owing (*a*) to some inherent disqualification in the substance itself; (*b*) to an inconvenient or difficult method of administration; or (*c*) to some unsuitable factor in the resulting condition of the patient.

Let us carefully pass the qualities of these vapours and gases in review, in order that if we become in any degree dissatisfied with those now in general use, or meet with cases in which their exhibition would appear to be inappropriate, we may then have definite data for reference which will guide and justify future action and give it a scientific basis in former experiment and research.

I. Nitrous Oxide Gas with Oxygen.

I think that few of us would propose to administer nitrous oxide gas (in the ordinary manner in which it is applied for dental purposes) to a woman in labour, because those symptoms which accompany the unconscious state, jactitation, rigidity, cyanosis and altered respiratory rhythm, would probably, even if the pain were relieved, be productive of so many increased difficulties and dangers in the parturient process that little would be gained by the attempt.

A mixture of oxygen, 20 parts, with nitrous oxide, 80 parts by volume, has however been used by Dr. Kilikowitsch, of St. Petersburg, for this purpose. He carries it in an indiarubber bag, containing about ten cubic feet, which he places under the patient's pillow, and from its mouthpiece he induces her to inspire at the advent of every pain. In an account of his method and its results, given by Dr. Macan, he claims "that the mixture is capable of supporting life like atmospheric air, is quite free from danger, the patient, though analgesic, never loses consciousness; neither nausea, vomiting, nor headache follow its use, and that the amount of uterine pressure exerted during the pains (as tested by the dynamometer) is not in the least diminished by its action."¹

I can find no account of this mixture having been employed for the relief of pain in childbed in this country, and have therefore arranged for a series of experiments with it in the maternity departments of two different institutions in London; the results of these I hope to publish very shortly, when a sufficient number have been collected from which to draw conclusions. There is, however, an apparatus for the administration of "gas" and oxygen in easily regulated percentages (varying from 1 per cent. to 10 per cent. of the latter), invented by Dr. Frederic Hewitt, and of this, which I have used largely at Charing Cross Hospital and elsewhere for minor operations requiring complete

muscular relaxation (such as the breaking down of joint adhesions, the passing of catheters in sensitive subjects, the removal of post-nasal adenoid growths, incision of the tympanic membrane, examination of the female pelvic organs, applications to and division of the cervix uteri, the opening and packing of bubonic abscesses, and as a routine anæsthetic in dental work), I am able to speak with confidence and satisfaction. It commands a tranquil, complete and sleep-like anæsthesia in which the cyanosis and jactitation usually attending the use of pure "gas" are eliminated, while the available time for operation is considerably prolonged; "the pulse is generally fuller and slower than that observed when nitrous oxide, free from air or oxygen, is administered," and after effects of any kind are of extreme rarity.

These results are obtained by commencing the inhalation with a small percentage of oxygen, and gradually increasing it according to the symptoms displayed by its presence in the blood. I have, chiefly watching respiration, been able to maintain regular breathing and deep sleep for over four minutes in certain procedures which required it.

In this mixture we have, therefore, all that is needed for our purpose, excepting that the apparatus demands practice in its use, and the weight of the steel cylinders, which contain the condensed gases, renders its portability rather a matter for consideration when the case is at a distance; there is no drawback to its adoption in the metropolis. It has also a very considerable advantage in the quick and easy transit which can be made to ether, if deep and sustained narcosis is required at any moment for an obstetric operation.

There has been no death recorded during the use of gas and oxygen by inhalation.

Ether.

The vapour produced by ether stands next in order of safety as an anæsthetic in general surgery, and though, as

will be referred to later, it is perhaps preferable to substitute it for that which has been exhibited during the earlier periods of labour when instrumental or operative interference becomes necessary ; yet its somewhat pungent taste and unfortunate habit of permeating the apartment, and often the whole house, with its odour, together with the fact that it yields a somewhat unsatisfactory condition of rigidity and tendency to vomiting *in the second degree* of narcosis, exclude it from general use in labour when chloroform can be obtained and is well borne. There seems, among the writers³ whose works are referred to at the end of this article, to be considerable evidence that ether may often, by its more stimulating effects, produce a decided recrudescence of uterine contraction when inertia has been present. I should not therefore hesitate, as my own experience corroborates their remarks, to change from any former anæsthetic to ether, with this purpose in view, if the labour were retarded, provided that neither dystocia nor other contra-indication to more rapid delivery were apparent in the case.

Dr. Simpson and his two pupils, Drs. Thomas Keith and Mathews Duncan, administered an equal part of tincture of ergot with sulphuric ether by inhalation to attain this object ; but, on examining the accounts of their cases,⁴ I think the resulting rapid deliveries (within a few minutes) were probably due to the more volatile of these two substances.

Bichloride of Methylene.

Sir Benjamin Ward Richardson, about the year 1867, advocated the use of a drug he had discovered, called bichloride of methylene of the formula CH_2Cl_2 , a clear, colourless liquid of specific gravity 1.349, boiling at about 127°F ., and of a very agreeable odour. It was adopted by Sir Spencer Wells, and used at his abdominal operations and at the Samaritan Hospital for many years subsequently. It closely resembled chloroform in its action, but was considered to be less depressing to the circulation, and was usually attended by very little nausea or vomiting. For

these reasons it formed a very safe and suitable anæsthetic for administration during labour, being given by the open method, with a Rendle's mask or by means of Junker's inhaler. Its *surgical* mortality in all kinds of cases only amounted to 1 in 5,000 operations; but it is now almost entirely out of fashion, as analysis has proved that, after a few hours keeping, it is merely a mixture of alcohol with chloroform, and its high price was too severe a test of its value as an independent drug.

The A.C.E. Mixture.

This valuable anæsthetic agent was suggested and used by Dr. George Harley, about thirty-five years ago, and when carefully experimented upon by the Committee of the Royal Medico-Chirurgical Society, which sat in 1864, was recommended by them in preference to chloroform.

Martindale states, in the Extra-Pharmacopœia, that by employing constituents of the following specific gravities a mixture is obtained which volatilises uniformly. Alcohol s.g. .795. (1 part by volume), chloroform s.g. 1.497 (2 parts), ether s.g. .720 (3 parts); thus avoiding a theoretical danger of giving an uncertain quantity of chloroform after ether has evaporated.

Dr. Playfair eulogises the use of the mixture during labour, as causing less over-relaxation of the uterus than chloroform, and strengthening the pains in such cases as were above referred to, in which ether was indicated. It is applied on a Rendle's leather or metal mask, and should be added in small quantities at a time, half a drachm or a drachm, rather than in larger amounts, in order to obtain the best results from an even evaporation.

Amylene or Pental.

The substance known to the first London anæsthetist, Dr. Snow, in 1856, as amylene, and lately again brought forward under the name of pental, approaches very nearly to an ideal anæsthetic agent, as far as regards the absence of

excitement in the second stage of inhalation, and the rarity of any after effects ; but the three deaths of which there are precise records clearly prove that it has the power of directly paralysing the heart before it damages the respiratory apparatus. It is a colourless and very mobile liquid of the low s.g. 0·659, having the formula C_5H_{10} sparingly, soluble in water boiling just below $102^{\circ} F.$, and so volatile as to approach to being a permanent gas. Its vapour is not pungent when inhaled, and has an odour somewhat resembling wood-spirit ; it is also said that after a few inhalations it is difficult for the patient to tell whether she is breathing it or pure air.

When administered by means of a closed (Clover's) or partially closed (Snow's) inhaler, the pulse is increased in frequency at first, and the respiration is accelerated, the colour becomes heightened, and sweating may supervene, but there is no increase in salivary flow, as under ether and chloroform ; and there is also less rigidity and struggling than with the latter drug. Recovery is very rapid, and Dr. Debout said, in a paper read before the Academy of Medicine, of Paris, "*A leur reveil et le premier moment de stupeur passé, leur physionomie est épanouie—(cheerful)*".⁶ Sickness is very infrequent after its use, for in Snow's 238 administrations it was only noticed twice, and only six or eight of the cases were sick after their first subsequent meal ; even in these latter neither faintness nor depression was present. He considered that a half-conscious yet analgesic state was easier to attain with amylene than with chloroform, and that the conjunctival reflex was often present, and even brisk, when pain was no longer perceptible. By means of his inhaler (a double metal cylinder, the inner one containing bibulous paper, with air-holes in the lid, and an efferent tube leading to a valved face-piece, he administered this drug to seven women in labour, of which the following notes show that it gave a comparatively favourable result.⁶

Case I.—Vapour dilute (15 to 20 per cent. of amylene in the air breathed), relief of pain rapid and complete. Half

an ounce of the drug used during twenty minutes—towards the end of labour.

Case II.—Vapour of the same strength. Patient was conscious between the pains, which were sharp and frequent. The os uteri was almost fully dilated ; at the beginning there was no interference with the labour. Half a drachm used for each pain for two hours.

Case III.—Same method and results, os fully dilated, administration for twenty-five minutes.

Case IV.—Same results. A very satisfactory anæsthesia, unconscious during the last quarter of an hour. Two ounces used during two hours.


Case V.—Had been in labour for ten hours before the administration was begun. After one hour's inhalation (during pains only) uterine contractions almost ceased, though she was hardly unconscious. Administration discontinued, pains returned in an hour.

Case VI.—Administration for one hour and ten minutes, os uteri not fully dilated, pains every two and a half minutes, complete relief, labour concluded soon afterwards.

Case VII.—Administration for one hour and twenty minutes. Os uteri previously dilated. There was one smart gush of blood just before the placenta was expelled, but bleeding then ceased.

This substance might, therefore, be useful in cases where much sickness is present, or in which chloroform had produced some untoward effect at a former confinement and an alternative vapour perhaps desirable ; but its use must be attended with constant watching of the pulse and colour, and even then I should prefer to substitute the A.C.E. mixture or ether if the deeper stages of narcosis were required.

Dr. Prince Stallard, of Manchester, has lately used pentol (a purer form of amylene) in 148 dental cases, placing two drachms of the liquid in a Clover's inhaler ; but death occurred in his last case in an almost similar manner to those recorded by Dr. Snow.⁷ The mortality among all the recorded cases is therefore 1 in 128·6, a very high percentage indeed.



Chloroform.

This should always be obtained from the best makers, who will ensure its purity, the absence of acids, hydrocarbons, and free chlorine, a specific gravity of 1·5 at 15°C, and an equable boiling point of 60·16°C. The most reliable test of chloroform being primarily impure or of having undergone decomposition is its *smell*, which should be agreeable, bland, and *non-irritating*; if irritating, it must be entirely discarded.

By what method should it be administered? Snow first discovered that a percentage of more than 5 of chloroform vapour in the air breathed was dangerous to life, because a *sudden* intake of larger percentages into the pulmonary circulation would produce direct cardiac muscular and nervous paralysis when the blood containing them reached the heart. This was proved by his numerous experiments upon animals, by his analysis of the cause of death in fifty cases in the human subject,⁸ and by the subsequent experience of the medical profession in Europe, corroborated by the before-mentioned Committee of the Royal Medico-Chirurgical Society which sat in 1864.

Dr. Snow used his inhaler above described, which yielded by adjustment this definite strength of vapour.

Nowadays, chloroform is largely given on the corner of a towel, on a puckered up piece of lint, or upon a Skinner's wire frame covered with flannel.

Writing in 1861, Sir Joseph Lister agreed with Dr. Snow as to the need for less than a 5 per cent. vapour of the drug in the inspired air, and made experiments which proved that with one and a half drachms of chloroform it was not possible to obtain a greater percentage by either of these methods.

Dr. Ernest Sansom, however, in 1870,⁹ urged that it was possible to obtain vapour of 13 per cent. even from one drachm of the drug, when sprinkled upon lint at the ordinary temperatures of 60°-64°F.

I will not presume to judge between the results obtained by two such high authorities, only knowing, as an anæsthetist using these methods in surgical operations, that I have never observed prodromal symptoms at all approaching to those of primary cardiac failure, in a very large number of cases. Any untoward symptoms I have encountered have always appeared in connection with respiration, and have been rapidly overcome by clearing the air-way, adjusting the posture (if free breathing were impeded), and regularly compressing the chest for a few moments. I therefore incline to believe that the 5 per cent. vapour is not easily exceeded when chloroform is freely and evenly distributed upon lint or flannel, as it is my own practice to do. But that there are very undoubted dangers from *respiratory* embarrassment during chloroform anæsthesia which act upon the heart I fully recognise; for the heart, which will cheerfully propel blood containing less than 5 per cent. of vapour of chloroform, *cannot do so if at the same time that blood be venous from asphyxia*. "The rapidity with which death ensues in asphyxia is *due more particularly to the effect of non-oxygenised blood on the medulla oblongata, and through the coronary arteries on the muscular substance of the heart*. The excitability of both nervous and muscular tissue is dependent on a constant and large supply of oxygen, and when this is interfered with excitability is rapidly lost."¹⁰ These facts must dominate our method and guide the whole administration. A prominent cause of respiratory irregularity in those early stages of narcosis which we are discussing is holding of the breath, and the cause of this is frequently because a whiff of rather strong vapour has been presented to the patient; if we, therefore, administer the chloroform in natural labours by means of an apparatus, such as that of Dr. Junker, with which the vapour at every inspiration can be adapted to the amount of respiratory reflex, we then attain the desired freedom from an asphyxial factor in a resulting tranquil analgesia.

(To be continued.)



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REPORT OF THE WORK DONE IN THE GYNÆCOLOGICAL
DEPARTMENT OF ST. VINCENT'S HOSPITAL, DUBLIN.

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I VENTURE to bring to the notice of the Fellows of the British Gynæcological Society a report compiled from the Registrar's return of the work done in the gynæcological department of St. Vincent's Hospital since my appointment as gynæcologist in 1891 to the end of last March. I was prevented by a long attack of illness, and by the annual summer closings, from devoting the entire time to the work of this department. The report, in reality, represents the work done during a period of a little over thirty-six months.

Gynæcological Wards.—The gynæcological wards contain 13 beds; 444 patients were admitted during the thirty-six months. I have divided the various diseases into four classes: extra-uterine, uterine, vesical, and miscellaneous; and I have tabulated under each head the diagnosis, with result. This division is arbitrary, the leading characteristic of each case determining its position in the different groups.

It would be impossible for me to review in detail this long list of cases. I shall merely bring under special notice those having features of special interest.

Fibro-miomata.—A relatively large number of cases of fibro-miomata presented themselves, viz., 24. Operations were only performed where the indications or urgency of the symptoms demanded that something should be done; consequently I found it necessary to operate on only seven occasions—once to perform panhysterectomy, five times

double oophorectomy, once morcellement. In eight cases slight pressure symptoms were relieved successfully by a suitable pessary. The remainder of the tumours caused little or no inconvenience to the patients.

TABLE I.—*Uterine Diseases.*

Disease.	No.	Cured.	Relieved.
Fibro-myomata	24	5	19
Endometritis	55	55	—
Endocervicitis, with erosion	30	30	—
Backward displacements—			
(a) Reducible	37	37	—
(b) Irreducible	24	2	22
Prolapse	13	13	—
Fungous endometritis	13	13	—
Dysmenorrhœa	35	?	?
Fibrous polypi	12	12	—
Post abortum endometritis	4	4	—
Cancer	13	*1?	12
Stenosis, os external	2	2	—
Hypertrophy, vaginal portion	1	1	—
Metritis, sub-acute	6	—	6
Cervical polypi (mucous)... ..	2	2	—

* One and a half years without return.

Endometritis.—All cases of endometritis were treated by curetting, and the injection, through a Braun's syringe, of one drachm of equal parts of the liniment and tincture of iodine. Previous dilatation being employed to ensure good drainage; all cases are kept in bed for seventy-two hours after curetting. No septic reaction followed in any case. Some rather interesting sequelæ were noted. One case, a patient, aged 25, has not menstruated since she was curetted two years ago. In six cases a temporary amenorrhœa followed the period, varying from three to six months; whilst in another the character of the menstrual flow has changed from a normal standard of from three to four days to that of one day, and very scanty; this condition persists since the curetting in November, 1894.

Endocervicitis with Erosion.—Simple cases of erosion were treated by first scarifying the part, and then applying a local bath of sulphate of copper solution—30 grs. to the ounce—every second day. In thirteen cases where the erosion was extensive I performed Schröder's operation by

removing the unhealthy mucous membrane. This operation is easily performed, and gives excellent results.

Backward Displacements.—All cases of reducible posterior displacements were treated by a properly-fitting Hodge pessary. The treatment of irreducible displacements gave very unsatisfactory results; there were twenty-four cases, and the line of treatment was as follows: rest in bed, bowels kept regular by saline mixture, the local application of equal parts of ichthyol and glycerine applied on plugs of cotton wadding to the posterior *cul-de-sac*, every second day, for a couple of weeks; patient was then put under an anæsthetic, and an attempt made to break down the adhesions through the rectum. In no case can I claim a distinct success by this method. Having failed in this recognised method of treatment, I performed laparotomy in two cases, separated the adhesions, and stitched the uterus to the abdominal wall.

Fibrous Polypi.—Schultze's double spoon was employed in all cases, and the polypus was removed by morcellation; quite large polypi can be easily removed by this method. A large sessile fibrous polypus was removed from a married woman in March, 1893. She made a good recovery, and was enjoying excellent health up to June, 1895, when hæmorrhage again returned. The patient was again admitted into hospital, when I removed a second fibrous polypus much larger than that which I had removed in March, 1893.

Cancer.—Thirteen cases of cancer of the cervix came under observation. In twelve of these all hope of a radical cure was out of the question, the disease having spread too far. Palliation by curetting away the broken down, unhealthy tissue, and cauterising the base with Pacquelin's cautery, or chloride of zinc, was employed where possible. In one case I performed total hysterectomy per vaginam; there has been no return of the cancer since the operation, eighteen months ago.

Lacerated Perinæum.—Lawson Tait's flap-splitting operation was employed on five occasions. The results were

excellent. On three occasions where there was extensive prolapse of the posterior wall, I dissected off a tract of mucous membrane, after Hegar, and stitched the freshened surface in layers, using the continuous catgut suture of Werth.

TABLE II.—*Miscellaneous Diseases.*

Disease.	No.	Cured.	Relieved.
Lacerated perinaeum	8	8	—
Ulcer, rectum	1	1	—
Vaginitis	4	4	—
Senile vaginitis	1	1	—
Sterility { Primary	4	?	—
{ Secondary	8	?	—
Puerperal mania... ..	1	—	Sent to Asylum.
Amenorrhœa	8	6	2
Hæmorrhoids	6	6	—
Prolapse, urethra	1	1	—
Intestinal catarrh	2	—	2
Chronic tubercular pelvic peritonitis	2	—	2
Dyspepsia	4	—	4
Ischio rectal abscess	1	1	—
Chlorosis	5	5	—
Climateric	1	—	1
Anæsthesia vulvæ... ..	1	—	1
Incomplete abortion	1	1	—
Vaginal cyst anterior wall	1	1	—
Umbilical hernia	2	2	—
Cancer of the intestines	1	—	1
Secondary P.-P. II.	1	1	—
Ascites	1	—	1
Pregnancy	1	—	—
Abscess of liver	1	—	Transferred.
Hydræmia, with anasarca	1	—	1
Debility	2	—	2
Cirrhosis, liver	1	—	1
Hydated cyst, liver	1	—	Transferred.
Gastric dilatation	1	—	„
Suspected tumour... ..	1	—	—

Anæsthesia Vulvæ.—An extremely interesting case of almost complete loss of the sensations in the external genitals was met with. It occurred in a young married woman, aged 38, who had enjoyed perfect health up to the birth of her first child. The labour was tedious and difficult, the child being hydrocephalic. She sought advice from me because of the altered conditions when in marital intercourse with her husband. On examination, the external genitals looked atrophied, comparatively bald; the remaining hair could be plucked out easily without pain; the patient could not distinguish between heat and cold, or when pricked with

a pin. A prolonged course of treatment, electrical and medicinal, gave no relief.

TABLE III.—*Diseases of the Bladder and Urinary Apparatus.*

Disease.	No.	Cured.	Relieved.
Cystitis	7 ...	7 ...	—
Vesico-vaginal fistulæ	4 ...	4 ...	—
Urethro-vaginal „	1 ...	1 ...	—
Villous tumour of the bladder	2 ...	2 ...	—
Cancer of the bladder	1 ...	— ...	1
Vesical calculi	1 ...	1 ...	—
Urethral coruncle... ..	5 ...	5 ...	—
Prolapse, urethra	1 ...	1 ...	—
Incontinence, urine	1 ...	1 ...	—

Cystitis.—The primary treatment, of all cases of cystitis which did not easily yield to washing out of the bladder and drugs, consisted of dilatation of the urethra, up to No. 15 Hegar. This brought about a temporary incontinence of urine, which in no case was permanent. The dilatation was followed by immediate relief of the pain. In two cases, however, where the cystitis was purulent, a vesico-vaginal fistula was made, and the bladder was injected with iodoform emulsion, made up of two drachms of iodoform to an ounce of glycerine of carbolic acid (1 in 30). Both cases, although tedious, made excellent recoveries.

Fistulæ.—Five patients with urinary fistulæ presented themselves. Four were vesico-vaginal, and one urethro-vaginal. All the patients had flattened pelves, and there was a history of prolonged labour. Two cases were treated by flap-splitting, which is easy to perform when the fistula is not too extensive and not too close to the pubic arch. Two cases were treated by freshening a broad area around the opening and suturing with silk. The fistula of the ureter gave a lot of trouble; the first attempt failed, as the sutures were not sufficiently deep enough, owing to a dread of suturing the ureter. However, on passing a sound through the bladder into the ureter, I was enabled to suture to my satisfaction, and the recovery was uninterrupted.

Prolapse of the Urethra.—This rare affection occurred in a young, unmarried woman, aged 19, who sought relief for a scalding pain during micturition, and because her under-

clothes were always stained with blood. On examination, a purplish mass like a large cherry protruded around the urethra. The orifice of the urethra was right in the centre ; the mass bled easily when touched. The case was treated by drawing down the prolapsed mucous membrane to a slight degree, and putting in fine silk provisional sutures, snipping off the protruded mass, then tying the sutures, bringing the urethral to the external mucous membrane. No stenosis followed this operation ; healing was by first intention, and relief of symptoms was complete.

Villous Tumour of the Bladder.—The two cases occurred in unmarried women, one, aged 24, the other, 32. The leading symptoms being vesical tenesmus, hæmorrhage and frequent micturition. Diagnosis was easily made by introducing the finger into the bladder through a vesico-vaginal incision. In both cases the tumour was situated on the anterior wall of the bladder. The base being small, I scraped it thoroughly with a sharp curette, under the guidance of the finger. Both cases did well, and left the hospital apparently quite cured.

TABLE IV.—*Extra Uterine Diseases.*

Disease.	No.	Cured.	Relieved.
Ovarian cystomata	24	...	—
Abscess of ovary	1	...	—
Hydrops folliculorum	2	...	—
Para- and perimetritis	6	...	—
Ruptured tubal pregnancy	3	...	—
Pelvic abscess after abdominal section, performed in America	1	—	Relieved.
Hydrosalpinx	3	Cured	—
Pyosalpinx	4	...	—
Adherent vermiform appendix	1	...	—
Recurrent salpingitis	11	4	7
Posterior parametritis	20	—	20

Abdominal Sections.—I have arranged the table so that one can see at a glance the nature and special features of each operation. I communicated with all the cases either directly or through the local doctor, to ascertain the present condition of each patient, and if there was any hernia through the abdominal incision. I have been very fortunate in getting replies from a large number, but some it was impossible to trace, as they had migrated to other homes.

Table of

No.	Sent by.	Name.	Age.	M. S. W.	Date of Operation.	Disease.	Flushed.	Drainage.
1	—	A. A.	46	M.	April 6, 1891	Unilocular ovarian tumour	F.	None
2	—	M. M'D.	50	„	May 19, 1891	do.	—	„
3	Dr. Garry, Liverpool	S. B.	22	S.	Oct 21, 1891	Dermoid cyst in right broad ligament	F.	Glass gauze, rubber; 1 month
4	—	A. G.	24	M.	Oct. 11, 1892	Hydrops folliculorum of right ovary	—	—
5	Dr. Kelly, Eyrecourt, Galway	N. C.	39	„	Nov. 2 1892	Large dermoid cyst, showing teeth, hair, &c.	—	Glass gauze; 5 days
6	—	W. R.	20	S.	Nov. 4, 1892	Multilocular ovarian tumour, size eight month pregnant uterus	F.	Drained glass gauze; 4 days
7	Dr. Cox, Dublin	T. S.	45	W.	Nov. 16, 1892	Parovarian cyst ...	—	—
8	—	R. C.	34	„	Feb. 3, 1893	Rapidly growing fibromyoma	—	—
9	Dr. Byrne, Merrion Street	J. R.	78	M.	Feb. 13, 1893	Ovarian cystoma ...	—	—
10	—	R. B.	45	„	May 12, 1893	Ovarian cystoma, size full term uterus	—	—
11	—	A. G.	25	„	May 24, 1893	Enlarged ovary, left side; 2nd op.	—	—

Abdominal Sections.

Features of Operation.	Stitches Removed.	Union.	Result.	Remarks.	Present Condition.	Hernia in Incision.
Several fresh adhesions, easily separated	April 14	Good	Recovery	—	Good	None
No complications	May 27	„	„	—	Fair	Hernia in track of 2nd suture
Cyst, gaseous, was adherent to middle third of the rectum; it burst during removal	Some, Oct. 28, 1891	Good granulation	„	Fæcal fistula formed on second day; discharged thro' abdominal adhesions	Married; good	None
No complications	Oct. 19	Good	„	—	Fair; complains of pain in right iliac region	„
No adhesions; contents of cyst spilled into abdomen	Nov. 10	„	„	—	—	„
Both parietal and visceral larses of the peritoneum covered with villous growth	Nov. 12	„	„	—	?	?
Pedicle very long	Nov. 24	„	„	—	—	Hernia, upper third
Left ovary large and cedematous; right, small and crumpled; double oophorectomy	Feb. 11	„	„	—	Good	None
Tumour had appearance like fibro-cystic	Feb. 22	„	„	—	?	?
No complications	May 19, 1893	„	„	—	Good	None
Intimate adhesions between right pedicle and cæcum. <i>Vide</i> No. 4	May 31	Granulation	„	—	—	„

No.	Sent by.	Name.	Age.	M. S. W.	Date of Operation.	Disease.	Flushed.	Drainage.
12	—	B. G.	43	S.	May 31, 1893	Umbilical hernia; fibro-myoma	—	—
13	—	M. D.	35	M.	June 7, 1893	Fixed retroverted uterus, with prolapsed ovaries	—	—
14	Dr. O'Carroll, Drumahaire	M. M.	17	S.	Oct. 31, 1893	Ovarian cystoma	—	—
15	Dr. Nolan, Balbriggan	N. R.	32	M.	Nov. 4, 1893	Hydrosalpinx, left side	—	Drained glass gauze : 2 days
16	Dr. Kelly, Eyrecourt, Galway	M. D.	35	„	Nov. 15, 1893	Multilocular ovarian tumour	—	—
17	—	M. R.	54	„	Nov. 23, 1893	Unilocular ovarian tumour	—	—
18	—	A. G.	25	„	Nov. 29, 1893	Adhesion of cæcum to old ovarian pedicle and vermiform appendix	F.	Drained glass gauze : 5 days
19	Dr. Carey, Dundalk	M. K.	38	„	Dec. 13, 1893	Rapidly growing fibromyoma, with hæmorrhage	—	—
20	—	M. M.	29	„	Mar. 21, 1894	Recurrent salpingitis; pyosalpinx; right side prolapsed; adherent ovary	—	—
21	—	M. C.	36	„	Mar. 23, 1894	Ruptured tubal pregnancy, right side	F.	Drained glass gauze : 3 days

Features of Operation.	Stitches Removed.	Union.	Result.	Remarks.	Present Condition.	Hernia in Incision.
Radical cure; three lavers sutured separately	June 6	Good	Recovery	—	—	None
Uterus separated, and fundus stitched to abdominal wall	June 14	"	"	—	Dyspnoea; otherwise good	"
Extremely relaxed and flaccid tumour	Nov. 7	Granulation	"	—	Good	"
Very extensive adhesions, with hæmorrhage	Nov. 11	Good	"	—	"	"
Extensive adhesions; base of tumour very solid; incision enlarged; Fallopian tube had two sacculations full of pus	Nov. 22	"	"	—	"	"
No complications	Nov. 29	"	"	—	—	"
Colectomy; resection of intestine; amputation of vermiform appendix	Dec. 7	"	"	Abdomen reopened for second hæmorrhage	Still complains of pain	"
Double oophorectomy	Dec. 21	"	"	—	?	?
Adhesions very extensive; vermiform appendix adherent; left ovary and tube freed from constricting bands	Nov. 28	"	"	—	Still complains of pain; dyspnoea	None
Right ruptured tube ligatured and removed	April 1	"	"	Patient greatly collapsed before operation	Good	"

No.	Sent by.	Name.	Age.	W. or M.	Date of Operation.	Disease.	Flushed.	Drainage.
22	—	J. K.	33	S.	April 18, 1894	Pyosalpinx, right side	—	—
23	—	J. G.	28	M.	June 20, 1894	Pyosalpinx on right, hydrosalpinx on left	—	Drained glass gauze : 3 days
24	—	M. K.	54	S.	July 7, 1894	Parovarian cyst ...	—	—
25	—	W. B.	32	M.	July 9, 1894	Adherent retroflexed uterus, with pro- lapsed ovaries	—	—
26	Dr. Murphy, Enniscorthy	A. M.	21	S.	Oct. 24, 1894	Ovarian cystoma ...	—	Drained glass : 2 days
27	—	M. B.	29	M.	Nov. 7, 1894	Recurrent salpingitis ; pyosalpinx	—	Drained glass gauze : 2 days
28	Dr. Moorhead, Tullamore	M. C.	35	"	Nov. 14, 1894	Dermoid cyst ; size, sixth month preg- nant uterus	F.	Drained glass gauze : 30 hours
29	—	L. C.	52	"	Nov. 21, 1894	Large multilocular ovarian tumour	—	—
30	—	M. H.	32	S.	Nov. 28, 1894	Ovarian cystoma ; size of foetal head	—	—
31	—	M. B.	32	M.	Dec. 11, 1894	Fibro-myoma, compli- cated with pregnancy	—	—
32	Dr. O'Gorman, Arklow	B. G.	25	S.	Jan. 30, 1895	Cystomata of both right and left ovaries	—	—
33	Dr. Burke, Ballyrowan	M. D.	29	M.	May 7, 1895	Ovarian cystoma ; right side	—	—

Features of Operation.	Stitches Removed.	Union.	Result.	Remarks.	Present Condition.	Hernia in Incision.
Adhesion extensive; left side left and looked normal	April 25	Good	Recovery	—	Good	None
Extensive adhesions burst during removal	June 28	"	"	—	"	"
No complications	July 15	"	"	—	"	"
Uterus separated and fundus stitched to abdominal walls	July 17	"	"	—	Ovaries prolapsed; dyspareunia; sterile	"
Adhesions extensive, which bled profusely	Oct. 24	"	"	—	Good	"
Cyst burst during removal	Nov. 15	"	"	Patient invalid for 5 years	"	"
Cyst rotated after puncture, spilling contents into peritoneal cavity; adhesions	Nov. 22	"	"	—	Gave birth to full term child a month ago	"
No complications	Nov. 29	"	"	—	Good	"
No complications	Dec. 5	"	"	—	"	"
Exploratory incision to confirm and establish diagnosis	Dec. 18	"	"	Transferred to Rotunda	?	?
No complications	Feb. 7, 1895	"	"	Patient had well marked signs of pregnancy milk, &c.	Good	"
No complication; extremely long pedicle; cyst reniform; free ascites; clean punched out hole in cyst wall	May 8	"	"	—	"	Small hernia in track of 3rd suture from top

No.	Sent by.	Name.	Age.	M. S. W.	Date of Operation.	Disease.	Flushed.	Drainage.
34	—	M. G.	44	S.	May 24, 1895	Umbilical hernia ...	—	—
35	Dr. Crossley, Newry	M. D.	38	M.	May 31, 1895	Multilocular ovarian tumour	F.	Drained glass gauze ; 24 hours
36	—	M. G.	40	„	June 7, 1895	Fibro-myoma ...	„	—
37	—	M. H.	28	S.	June 11, 1895	Fibro-myoma ; rapidly growing hæmorrhage	—	—
38	Dr. Soroghan, Belturbet	E. H.	28	„	July 1, 1895	Fibro-myoma growing	—	—
39	—	M. K.	19	„	Oct. 23, 1895	Multilocular ovarian tumour, right side,	—	—
40	Dr. Kelly, Eyrecourt, Galway	C. Q.	25	„	Nov. 6, 1895	Solid ovarian tumour left side	—	—
41	—	M. D.	24	M.	Nov. 27, 1895	Abscess of right ovary	F.	Drained glass gauze . 2 days
42	Dr. Anderson, North Frederick-street	E. M.	13	S.	Jan. 15, 1896	Ovarian cystoma extending to ensiform cartilage	—	—
43	Dr. Dempsey, Great Brunswick-street	M. B.	23	S.	Jan. 22, 1896	Fibro - myoma, with pressure on urethra ; growing	—	—

Features of Operation.	Stitches removed.	Union.	Result.	Remarks.	Present Condition.	Hernia in Incision.
Sac twisted; stitched in three layers	June 22	Good	Recovery	—	Good	None
Very intimate intestinal adhesions; hæmorrhage from abdominal wall after separation of adhesions	June 10	"	"	—	"	"
Panhysterectomy	July 15	"	"	—	"	"
Double oophorectomy	June 18	"	"	—	Hæmorrhage still continues	"
" "	July 9	"	"	—	Good; tumour got quite small	"
No complications	Oct. 31	"	"	—	"	"
Enormous ascites	Nov. 15	"	"	Secondary hæmorrhage; abdomen re-opened	"	"
Vermiform appendix adherent to top of cyst; very extensive adhesions; cyst burst; extremely fetid	Dec. 5	"	"	—	—	"
No complications	Jan. 23	"	"	—	—	"
Double oophorectomy	Jan. 30	"	"	Pessary introduced	—	"

No.	Sent by.	Name.	Age.	M. S. W.	Date of Operation.	Disease.	Flushed.	Drainage.
44	—	M. W.	33	M.	Jan. 29, 1896	Tubal pregnancy; ruptured on right side; hæmatosalpinx on left	F.	Drained gauze; 24 hours
45	Dr. O'Donell, Pembroke Road	M. M.	38	„	Feb. 5, 1896	Ovarian cystoma, right side	—	—
46	—	M. K.	43	S.	Mar. 4, 1896	Difficult to diagnose tumour	—	—
47	—	M. T.	29	M.	Mar. 11, 1896	Ruptured tubal pregnancy	—	—
48	—	M. C.	27	„	Mar. 13, 1896	Hydrosalpinx of outer 3rd of left Fallopian tube, right side	—	—
49	—	„	30	„	Mar. 18, 1896	Hydrosalpinx, involving entire tube	—	—
50	—	M. D.	40	„	Mar. 26, 1896	Ventral hernia ..	—	—
51	—	„	46	„	Mar. 27, 1896	Solid ovarian tumour, size of turkey egg; fibro-myoma	—	—

Features of Operation.	Stitches Removed.	Union.	Result.	Remarks.	Present Condition.	Hernia in Incision.
General pelved peritonitis, with adhesions	Feb. 6	Good	Recovery	—	—	None
No complications	Feb. 13	„	„	—	—	„
Tumour found to be fibro-myoma	Mar. 11	„	„	No urgent symptoms	—	„
No blood in peritoneal cavity; hæmatoma utero-sacral, ligament, right side	Mar. 18	„	„	—	—	„
Left side separated from adhesions and left	Mar. 20, 1896	„	„	—	—	„
Extensive adhesions	Mar. 25, 1896	„	„	—	—	„
Stitched by through - and - through interrupted silk sutures	April 3, 1896	„	„	—	—	„
Some ascites, solid ovarian, removed; fibro-myoma left	April 4, 1896	„	„	—	—	„

Thus we see fifty-one abdominal sections were performed as follows :—Seven times for diseases of the Fallopian tubes—*i.e.*, three cases of hydrosalpinx, three cases of pyosalpinx, and one mixed, a hydrosalpinx on the right side, and a pyosalpinx on the left. Three times for the radical cure of hernia, two umbilical and one ventral. Twice to separate adherent retroflexed uteri, and to stitch the fundus to the abdominal wall. On twenty-four occasions to remove ovarian tumours. Once for abscess of the ovary, once for hydrops foëliculorum, once for an enormously hypertrophied prolapsed left ovary. On six occasions was section performed to relieve—the sufferings caused by fibro-myomata, once for panhysterectomy, five times for double oophorectomy. On three occasions for ruptured tubal pregnancies, once for cholectomy and amputation of the vermiform appendix, and twice for exploration, making in all fifty-one abdominal sections without a death.

I have, from time to time, at different meetings of the Royal Academy of Medicine in Ireland, shown the ovarian tumours and specimens of the diseased tubes and ovaries, consequently I will only draw attention to some points of interest which I think may be permitted when reviewing such a group of cases.

In all my work the principle has been recognised that the functions proper to women should not be interfered with, except for good and sufficient reasons, and therefore, where possible, a conservative principle in abdominal surgery was practised. In other words, in thirty-six of the fifty-one patients, the functions of ovulation, menstruation, &c., were not interfered with by the operations.

Tubal Diseases.—All the cases of tubal diseases were complicated with very extensive adhesions. Great assistance was obtained by placing the patients on Trendelenburg's table, and no difficulty was found in protecting the general peritoneal cavity, by an arrangement of sponges, from infection when the tubes burst during removal. The hæmorrhage was never very extensive ; it was easily controlled by sponges wrung out of hot water or the application of ligatures.

In cases No. 15, 20, 22, 40, 47, 48, the appendage from one side only was removed, that on the opposite side was preserved, after all adhesions or constricting bands were broken down. This line of treatment has been successful in all cases except No. 20. I have examined the patient within the last few days; there is undoubted evidence that the tube and ovary left behind are greatly damaged, with probably a collection of pus in the Fallopian tube. I intend to re-open the abdomen and remove it.

Hernia.—The method employed in treating the umbilical hernia in Case 12, was to dissect the sac down to the ring, ligature and amputate its free portion, then stitch the abdominal wall in layers, using sterilised silk. In the second case, No. 34, the sac, having been freed down to the ring, was twisted on itself, as recommended by Dr. Ball, and the wound brought together by deep and superficial sutures.

I employed a slightly different method in Case 50, a ventral hernia. The seat of the rupture was on the right side; it was four inches in extent, running midway between the anterior superior spinous process of the ilium and the umbilicus, and almost parallel to Poupart's ligament. Having dissected the sac down to the ring, I found the margin of the ring bevelled from within outwards. With a curved scissors I removed the entire border of the ring, and increased its length by incising the upper and lower ends of the opening, thus making the opening exactly like a fresh abdominal incision. I then sutured the entire thickness of the wall, using interrupted silk sutures.

Ventro-fixation.—This operation I performed twice. The first case, No. 13, was very easy. The adhesions between the fundus and Douglas' pouch were band-like, and easily broken down. But in the second case, No. 25, I was not so fortunate. I had to deal with a surface adhesion, which bled profusely, and caused me considerable anxiety. It was eventually controlled by a purse-string suture; both tubes and ovaries were adherent, and had to be separated.


The uterus came up easily, and was without difficulty sutured. On examining this case, some months subsequently, an interesting condition was found. The uterus was still in front, but the ovaries were lying in the pouch of Douglas. From this it is obvious something must be done to suspend the tube and ovaries.

Ovarian Tumours.—Of the twenty-four ovarian tumours, two were solid, probably myomata; three were dermoid; and nineteen ordinary cystomata. The limits of age: a child, aged 13, and a woman, aged 78. On four occasions the adhesions were very extensive, the intestines being intimately adherent, and had to be dissected off at the expense of the cyst. Care was taken to split the wall of the cyst, so as not to leave any of the cyst epithelium.

After the removal of one of the dermoid cysts, which contained gas, and was adherent to the rectum, an interesting sequela followed. A fistula of the rectum formed, and discharged through the drainage tube. This fistula healed rapidly after hyper-stretching the anus, and the constant irrigation of the rectum.

Associated with another of the dermoid cysts was a curious condition of the Fallopian tube. Two sacculations, each the size of a bantam's egg, full of pus, were seen bulging from the free border of the tube, and separated by a quarter of an inch of otherwise normal Fallopian tube. They seemed to be on the point of rupture.

Panhysterectomy.—This operation was performed as follows in Case No. 35:—After the broad ligaments were ligated and divided, a curved incision was made through the vesico-uterine fold of peritoneum, and the bladder peeled off. The uterine arteries were then tied separately, and the vagina opened into from above; then the cervix was completely freed by snipping with a long, curved scissors. Much assistance was gained by inserting an instrument to distend the vagina, so as to cut down on it. The ligatures were left long, and were drawn into the vagina. The pelvis was then irrigated with saline solution, and a loose plug of iodoform gauze put in the vagina.



Double Oophorectomy for Fibro-myomas.—Double oophorectomy was performed five times—Cases 8, 19, 37, 38, 43—the chief indications being rapid growth of the fibro-myoma, hæmorrhage, and youth of the patient ; in one case, No. 42, the urgent indication was rapid growth, with pressure on the urethra, which was not relieved by a pessary. Four of the cases are, so far, permanently benefited. The tumours became smaller, and the hæmorrhage ceased. But in the case of No. 37, the hæmorrhage has not been arrested ; the menstrual periods were not interrupted. The flow is still quite heavy.

Ruptured Tubal Pregnancies.—Cases 21, 44, 47, belonged to this class. In Case 21, the hæmorrhage was intra-peritoneal, and the patient very collapsed. The ruptured sac, on removal, proved to be an example of “tubal abortion.” In Case 44, the hæmorrhage was also intra-peritoneal, but had become encapsuled by a layer of protective peritonitis, probably due to a slow rupture of the tube, although the tube, on removal, showed a large rent. Case 47 was very interesting. It occurred in a young married woman, who was three years married and sterile. I had examined her some months previously, and found a reducible backward displacement, and put in a pessary. The patient enjoyed good health, the menstruation being quite regular. The day before admission she was suddenly seized by a severe cramp in the lower part of the abdomen, accompanied by collapse and a discharge of blood, *per vaginam*. A large mass was found filling the right posterior *cul-de-sac*, displacing the uterus forwards and towards the left. I opened the abdomen, and found the pouch of Douglas quite empty, its floor on the right side was bulged forwards by a large mass, which seemed to merge into the right broad ligament. The surface of this mass was quite irregular, and I recognised that I had to deal with a hæmatoma of the right broad ligament, which had dissected backwards, due probably to a ruptured tubal pregnancy. I examined this case a month after the operation, the hæmatoma has nearly disappeared, but is causing a gradual

displacement of the uterus, by dragging it backwards during its absorption.

Colectomy and Amputation of the Vermiform Appendix.—In Case No. 18 the cæcum, with vermiform appendix, had become adherent to an old ovarian pedicle. On separating them a large ulcer was found engaging the cæcum and apex of the vermiform appendix. Colectomy was performed, removing the entire ulcer, and the appendix was amputated; the details of this very interesting case have been already communicated in a special paper.

Vermiform Appendix.—Twice during the fifty-one sections did the appendix play an important part—once, as in Case 18, mentioned above, where it was adherent to an old ovarian pedicle; and once—Case 40—where it was adherent to the surface of an ovarian abscess, and lay right in front of the tumour.

Flushing the Peritoneum.—The peritoneum was flushed ten times. At first I used ordinary boiled water, cooled to a temperature of 99° F., but for the past two years I used nothing but normal saline solution at a temperature of 99° F. Flushing was employed where the peritoneum was fouled or soiled by contents of cysts or tubes, or to assist in removing the blood in the ruptured tubal pregnancies. The excess of fluid was generally aspirated; no mopping or soaking up with sponges was practised.

Drainage.—Drainage was employed fourteen times. On thirteen occasions Keith's glass drainage-tube was used, and once silk ligatures passed into the vagina. The Keith's tube was always placed at the lower angle of the abdominal wound; drainage was assisted by aspiration, and strips of iodoform gauze passed to the bottom of the tube. The drainage-tube was removed as soon as the fluid aspirated was a clear straw colour. All cases having drainage-tubes were dressed twice daily, or as often as required, and drainage-tube rotated to avoid adhesion. On one occasion a peculiar accident occurred: on withdrawing the drainage-tube a loop of intestines was pulled out, and it was found so

intimately adherent to the tube, that on attempting to separate it the intestine was unfortunately opened, and fæces escaped, fouling the parts. I carefully disinfected by flushing, closed the rent in the intestine with a purse-string and Lembert's suture, and dropped the intestine back; the recovery was uninterrupted.

Suture of Abdominal Walls.—The abdominal walls are sutured by interrupted silk sutures, using stout silk, taking in the entire thickness of the wall. I use strong curved needles, and feel with my fingers that the aponeurosis is included. Out of all my abdominal sections hernia has only occurred, as far as I can ascertain, in three cases—Nos. 2, 7, 33. Of course, it is too soon to claim complete immunity from hernia among my recent cases. All sutures are removed on the eighth day; stitch abscesses were very few, they occurred in some of my earlier cases, but since employing better methods of sterilisation it is an accident unknown in my practice.


The Dressing.—The dressing employed is very simple. A powder of equal parts of iodoform and boracic acid is dusted over the wound; over this a sterilised pad of absorbent cotton, folded in a few layers of ordinary butter muslin, all held in position by strips of rubber plaster, and over all a flannel binder.

After-treatment of Abdominal Sections.—The usual practice is for patients to receive nothing but sips of hot water for the first forty-eight hours, then milk and weak tea; where the thirst is very excessive the acidulation of the water with dilute phosphoric acid was found to be refreshing and comforting. Morphia is now never given for the relief of pain; its use is considered dangerous, as likely to lead to the formation of intestinal adhesions. When the pain is severe, phenacetine, in 10 gr. doses, is administered, to be repeated in two hours if required. The results from phenacetine are most gratifying, as the pain is generally relieved without obscuring in any way the intellect of the patient or interfering with the intestinal action. For flatulence I find

that twenty drops of spirit of cajaput, with twenty drops of spirit of ammon. aromat., in a little water, is safe and efficient. Severe vomiting was checked by washing out the stomach if the ordinary simple remedies gave no relief. Purgatives are given the second morning after the operation. I generally order 3 grs. of calomel, to be followed by a seidlitz powder; or, when prompt action was required, the ordinary saline mixture of the house in ounce doses. When the bowels did not act, I gave a turpentine enema. Except where drainage was employed, the dressing was not removed until the eighth day. Before removing the stitches I took the precaution of saturating their free ends with corrosive sublimate solution, 1 in 500.

Antiseptics.—I superintend, assisted by the sister-in-charge of the ward, every detail myself. Sterilisation of instruments likely to be required for operation is carried out by boiling them for five minutes, immediately before the operation; in a solution of 1 per cent. of carbonate of sodium, in Schimmelbusche's apparatus. Silk is sterilised by boiling for half an hour in a 1 per cent. solution of carbonate of sodium; it is then placed on glass spools and kept in a bath of corrosive sublimate solution, 1 in 1,000, until required for use. Gauze sponges are used instead of sea-sponges; they are made up of eight layers of butter muslin, stitched together at the margin (the usual size, 7 + 7 inches; all sponges, gauze dressings, towels, &c., are sterilised by being placed in Lantenseblager's steam steriliser for one hour at boiling point.

Preparation of Patient.—The entire body of the patient was cleansed by a bath or otherwise, as seemed most suitable. The skin of the region to be operated on was thoroughly scrubbed with monkey-brand soap and very hot water, shaved when necessary, then washed down with corrosive sublimate solution, and covered with a corrosive sublimate poultice. Immediately before operating the abdomen was washed with ether, and then sponged with hot corrosive sublimate solution. Dry sterilised towels are spread over the chest and



thighs of the patient as a further protection against the danger of infection.

Sterilising Hands.—The stages for sterilising the hands are as follows :—(1) Pare and cleanse nails with scissors. (2) Soften hands with a lather of soap, then scrub thoroughly with soap and hot water, paying special attention to folds of skin and nails, and using aseptic nail brush. (3) Immerse hands for two minutes in corrosive sublimate, 1 in 500, made tepid, and leave them wet. (4) Keep hands moist with the same solution during operation.

Administration of the Anæsthetic.—Ether is the anæsthetic used under ordinary circumstances. Whatever the anæsthetic it is used in measured quantities. The method for administering ether or chloroform is, after the patient had been put lying down, and the mouth examined for false teeth, &c., the throat and waist are looked to to see that they are in no way restricted. The patient is made to take in fifteen or twenty deep, rapid inspirations of ordinary air before the ether inhaler, which is turned on full, is applied ; this method is found to prevent struggling and discomfort, and, except in cases of confirmed alcoholics, brings the patient rapidly under the influence. No doubt the condition of apnœa, brought about by the respiratory gymnastics, tends to this happy result. I take this opportunity of thanking Surgeon M'Ardle for his kind assistance at the majority of my abdominal sections ; his advice was freely given ; and at all hours of the day or night he was ever ready to give a helping hand.


Such is the record of the work done by me at St. Vincent's Hospital. In tabulating the various diseases I left out a column for mortality, as since my appointment in 1891, no case of death has occurred.

VAGINO-FIXATION OF THE UTERUS.

By J. J. MACAN, M.D.

It is hardly six years since the method of relieving displacements of the uterus by vaginal fixation was prominently brought forward by Dührssen and Mackenrodt. The operation was speedily and extensively adopted. Its immediate effects were almost uniformly beneficial, and the relapse of the uterus into its former abnormal position was exceptional. The danger of the vaginal operation was esteemed so slight compared with laparotomy, or even with the Alexander-Adams operation, that many were led to perform it in cases in which pessaries were useless or could not be borne, and some to prefer it to orthopædic measures in all cases. Several gynæcologists beside the promoters number their cases by hundreds; and it was recently asserted¹ that in Berlin alone at least a thousand women had been subjected to it; but no definite estimation of the value of the method for permanent cure could be arrived at until its effect in restoring fertility, and upon the course of pregnancy and labour, had been ascertained, and the general opinion of its merits has been most unfavourably influenced by some recent observations.

About a year ago Strassmann² reported to the Berlin Society the death, in childbed, of a woman on whom Dührssen had performed vaginal fixation after cœliomyotomy. Labour began with prolapse of the cord, and the child was dead before any medical man was present. The portio lay to the right side above the linea innominata, and in front, and to the left of it, the pregnant uterus formed a projecting pouch which contained the foetal head; the shoulder of the child lay in the os. Kolpeuryesis was little



use ; turning, perforation or decapitation was impossible. Eclampsia supervened, and when tetanus and impending rupture of the uterus led Gusserow to open the abdomen, a spoonful of blood was found in the cavity. The uterus was opened, and when the child and placenta had been removed, was amputated above the vagina, and the pedicle treated extra-peritoneally. Some hæmorrhage was controlled, and the right parametrium fixed to the abdomen, but the woman died anæmic in an hour and a-half.

The highest point of the uterus was at the right ovary, the inner os was to the right of the median incision ; the left edge of the uterus was fixed to the vagina without intervening peritoneum, and the bladder lay to the right side behind the vagina and portio. The vaginal vault and uterine substance was lacerated, but the pedicles and ligaments were found well secured, and the internal hæmorrhage had come from the rupture.

Strassmann reported another case of obstructed labour after vagino-fixation, which was terminated by version ; but with great difficulty, serious injury to the mother and loss of the fixation of the uterus.

A patient of Mackenrodt's conceived five months after the vaginal fixation of her uterus, and within two had pains like those of labour, but pregnancy continued beyond term. Cross birth ; portio abnormally elevated, eclampsia *inter partum*. As version would have been difficult if not impossible, Graefe performed Cæsarean section happily as regarded the mother.³

Among thirty-seven cases of vagino-fixation in Schauta's clinic, Wertheim⁴ reports three cases of pregnancy. In two of these women the operation had been done without opening the peritoneum ; one of them aborted in the fourth month, the other had a normal labour at term.

In the third case the plica had been divided, and the uterus fastened directly to the vagina ; and even before conception, five months after the operation, the fixation had been recognised as abnormally firm, the uterus being

as it were riveted to the anterior vaginal vault. As the organ enlarged during pregnancy, the point of fixation was dragged upwards, so that a dimple, and, ultimately, a funnel-shaped pit, was formed in the anterior vaginal wall; and at the same time the portio rose upwards and backwards, so that at the end of pregnancy it lay above the promontory beyond the reach of even two fingers. The woman, a II-para, was advised to enter the clinic as an abnormal labour was expected. Her broad uterus extended to the posterior axillary line on each side, but did not reach more than a hand-breadth above the navel. Cross birth; head over right ilium, and the heart sounds near the navel. The bottom of the funnel in the anterior wall could hardly be touched. The fixation cicatrix could be traced to the apex of the recess, and the portio could only be reached when the whole hand was in the vagina. The anterior lip of the os was hard and swollen, the posterior seemed to have been entirely taken up into the wall of the genital canal. In front of the os the uterus did not project much into the pelvis. The position of the fundus was indicated by the convergence of the round ligaments to a point three or four fingers' breadth below the navel. Labour did not progress in spite of strong pains. After seven hours the os barely admitted two fingers, and seemed to have retired upwards, while the anterior uterine wall descended into the pelvis. The enormous tension of the posterior wall indicating interference, and the membranes being still unruptured, turning was performed in deep anæsthesia (in Braxton Hicks' way), but with great difficulty, on account of the elevation of the os and the cramped position of the hand. Permanent traction was kept up by a weight attached to the extracted foot; three hours later the breech appeared and a living child (3,900 grms., 54 cm.) was extracted by hand. Intra-uterine examination confirmed the conditions as above stated. The thinning of the posterior uterine wall extended to a handbreadth above the navel, where there was a prominence like a contraction ring. Normal childbed.

Rühl (Eibach-Dillenburg), in an extensive gynæcological practice, has performed two hundred and thirty-five vagino-fixations, and has been well satisfied with the results, especially with those of more recent cases. Pregnancy occurred in ten cases, and labour was normal in seven; in the other three it was protracted, but the women were successfully delivered by version, so that he believed that such difficulties in labour as occurred after vagino-fixation could be remedied by early version. He has been since taught a different opinion by the following cases, quite analogous to Strassmann's.

1.—A 32 year II-para, operated on in April, 1894, seven years after the birth of her first child, for retroflexion with adhesions. Rühl made a journey of some hours to see her on receiving from the midwife a message that though the woman had been in labour more than forty-eight hours, and the pains were very strong, the os uteri could not be felt. The membranes had broken shortly before his arrival, and the child was dead. The os uteri lay to the right above the linea innominata, the head projected into the pelvis in a pouch of the anterior uterine wall, and was immovable. The pains persisted between the contractions, and the uterus was extremely sensitive to the least touch. Under deep anæsthesia he with great difficulty introduced his hand into the uterus and laid hold of a foot, but turning was not possible. He then succeeded in perforating the head, though the grip of the perforator lay entirely in the vagina. After the skull was emptied the application of the cranioclast was comparatively easy, but the foetus could not be extracted until he had divided the anterior lip and wall of the uterus to the extent of 5.5 cm., preventing hæmorrhage by six catgut ligatures embracing the edges of the incision. The placenta had to be extracted by hand. The incision was sutured, and the woman made an uninterrupted recovery, the uterus, after complete involution, lying in a normal position.

2.—A III-para of 29 years, operated on February 26, 1894. Labour began November 25, 1895. Premature


rupture of the membranes and prolapse of the cord ; reposition and turning impossible. After an incision of 8 cm. had been made forward from the os, the child was extracted with the forceps, the placenta followed spontaneously, and after suture of the incision the woman made a good recovery. Rühl says the incision should be made under control of the fingers in the uterus, and by cuts of not more than 2 cm. at a time, after each of which ligatures should be inserted to prevent hæmorrhage ; these ligatures are not cut short, but serve to facilitate the following cut.

In the former of these cases there were serious vesical troubles ; the woman had great difficulty in making water especially after being long in a horizontal position. The same troubles complicated the second case.

Strassmann concludes that vagino-fixation gives rise to abnormal anatomical conditions, which not only cause obstructed labour but interfere with its obstetric treatment. Version, even if possible, is likely to cause deep lacerations, and very often the child must be mutilated, or Porro's operation—the danger of which is increased by the difficulty in forming the pedicle, and the liability of the retention of the lochia—must be performed.

Graefe not only attributes to the fixation of the uterus to the vagina all the difficulties in his case, the cross birth and the premature rupture of the membranes, and posterior elevation of the os, which made turning almost impossible but also suggests, as does Strassmann in regard to his own case, that the eclampsia may have been caused by some angular distortion of the ureters due to dislocation of the bladder.

Dührssen ⁶ insists that the evil in Strassmann's case must be ascribed to the myomectomy, the stitches closing the uterus having been led into the vagina, and not to the vagina-fixation, and that by his last method of closing the peritoneum by a separate suture, and in such cases abandoning the stitches referred to in the peritoneal cavity, he ensures a seroso-serosal union which does not interfere with



the proper development of the uterus during pregnancy. He draws attention to the fact that the treatment of retro-deviations by pessaries is not without serious drawbacks, and claims, as the result of 148 cases of intra-peritoneal vaginal laparotomies (presumably controlled), he has had only one relapse and one fatality.

Mackenrodt⁷ asserts that no trouble, other than relapse, occurs after vagino-fixation through the excavation, but that Dührssen's method of fixing the uterus to the vagina outside the peritoneum causes solid adhesions that keep even the pregnant uterus in pathological antifixion and seriously complicate labour. He tried it himself in thirty cases, and found it unsatisfactory. His own method of closing the excavation by a continuous suture, was successful in 90 per cent. of the cases, but he has now abandoned it in favour of vesico-fixation performed in the following way. After a vertical or transverse incision through the vaginal vault the bladder is detached from the collum uteri and pressed out of the way, the excavation is opened, and the vesical fold of peritoneum, shortened as much as possible, is approximated and sutured to the fundus uteri; that part of the bladder wall detached from the collum is attached to the corpus down to the level of the inner os, and the vaginal wound closed. This method, he claims, at once places the uterus in a normal position, completely obliterates the excavation, causes as little dislocation of the bladder as possible and is followed by no complications, uterine or vesical. Staude⁸ in vaginal fixation has always, after transverse incision of the anterior fornix, detachment of the bladder and opening of the peritoneum, fastened the fundus uteri to the bladder; the anterior wall of the corpus is drawn down by four or five provisional sutures, and the vesical peritoneum is sewn to the uterine by a continuous catgut suture, the last stitch closing the peritoneal cavity, the vaginal wound is then stitched up, and the provisional sutures knotted in the vagina. This method, he says, has the advantages just mentioned, and the displacement does not recur; it is indi-

cated in all cases of mobile retroflexion not amenable to pessaries, *i.e.*, in cases of descent or prolapse with a wide vagina; when there are cicatricial cords in the base of the broad ligaments dragging on the cervix; when the vagina is too short or the vaginal vault undeveloped, or when the attachments of the uterus are so loose that the organ is too movable.

Entirely apart from the intrinsic value of vagino-fixation as a means, either by itself or combined with other operations (Sänger's retro-fixation, and plastic operations on the vagina), of remedying displacements of the uterus, gynæcological surgery has been materially extended by the perfection of the operation of anterior vaginal coeliotomy by Mackenrodt and Dührssen and their followers.

If further cases of obstructed labour, as seems probable, prove that vagino-fixation is quite unsuitable for women who are not past child bearing, it will be a matter of great regret, especially for those gynæcologists who recognise that the serious consequences of retro-deviations of the womb can in a large number of cases only be relieved by operative treatment but are not inclined to the Alexander-Adams operation. Vagino-fixation is less dangerous than any ventral operation, there is no risk of abdominal hernia, no ugly abdominal scar, and no troublesome abdominal dressing; there is not, as in every laparotomy, a chance of adhesion of the omentum to the scar and ileus; convalescence is much shortened and the patient is much sooner able to go about her work; and as a vaginal operation inspires comparatively little dread, there is far less difficulty in inducing a patient to submit to radical rather than palliative treatment in incurable cases. No doubt, as in the case of every new method of treatment, there has been a tendency in some quarters to perform vagino-fixation too often, but in studying the literature of the subject of the treatment of displacements by operation, the sober restraint with which the question is reviewed by the great German gynæcologists is every evident; Leopold⁹ for instance, says that the too

frequent employment of vagino-fixation is on all sides condemned, and Sanger¹⁰—who insists that the restoration of the normal position of the uterus must be the foundation of all rational treatment, and who has about 230 cases of retro-deviation annually—strictly limits operation to the cases in which treatment by pessaries, so successful in skilled hands, is inadequate. In four years he has only performed 38 vagino-fixations, and his statement of the indications for operation is the one generally accepted.

Nor is vagino-fixation entirely free from danger; one case of Duhrssen's¹¹ died from peritoneal hemorrhage and inflammation; Wertheim¹² records a case from Schauta's clinic, of perforation of the intestine in a transperitoneal operation; Jacob's,¹³ one of perforation of the bladder, happily remedied by suture in two stages, and by ventro-fixation ten days later. The danger of sepsis is real, as the rise in temperature of many of Mackenrodt's cases proves.

Moreover, apart from the danger of obstructed labour, abortion is very common. It occurred in 25 per cent. of Duhrssen's pregnancy cases, even if all undelivered, went to term, and in 27·2 per cent. of those in the Berlin Policlinic. The uterus may relapse into its faulty position after pregnancy (three out of twelve available cases of Duhrssen). Leopold insists that the position of the uterus is more pathological after vagino-fixation than after ventro-fixation. Nor does the intra-peritoneal operation appear to be at all so successful in restoring fecundity as ventro-fixation; hardly any conceptions are reported after Martin's colpotomies (nearly all completed by vagino-fixation); and of Duhrssen's twenty-four pregnancies only one was after an intra-peritoneal operation. Vesical troubles during pregnancy were serious in Ruhl's cases, and Duhrssen¹⁴ has reported angular distortion of the ureters, to which both Strassmann and Graefe, as already stated, have referred the origin of eclampsia *inter partum*; and six of Duhrssen's cases suffered severe pains in the cicatrix.

Vagino-fixation is unsuitable to adherent retroflexions

until all adhesions have been separated, if necessary by opening the vaginal vault; the attachment is liable, if of two serous surfaces, to give way and allow relapse, and if otherwise, to interfere with subsequent pregnancy and labour, to a dangerous extent, even if it does not cause abortion. The operation has all the advantages of a vaginal over a ventral cœliotomy; but is by no means in all cases easy to perform (Graefe), and even if it does not allow relapse may not be successful; in a case reported by Ludwig,¹⁵ operated by Mackenrodt's earlier method, the troubles persisted, and hysterectomy had to be afterwards performed for their relief.

For the literature of vagino-fixation, see DUEHRSEN's article, *Berliner klinische Wochenschrift*, 1896, Nos. 13, 14.

¹ BOKELMANN, *Centralblatt. f. Gyn.*, 1895, p. 1371.—² STRASSMANN, *ibid.*, p. 850.—³ GRAEFE, *Monatschr. f. G. u. G.*, 1895, II., p. 473.—⁴ WERTHEIM, *Centralb.*, No. II., 1896.—⁵ RUEHL, *Centralb. f. Gyn.*, 1896, p. 147.—⁶ DUEHRSEN, *ibid.*, p. 190.—⁷ MACKENRODT, *ibid.*, 1895, p. 1302.—⁸ STAUDE, *Monatschr. f. G. u. G.*, 1896, III., p. 2.—⁹ LEOPOLD, *ibid.*, 1896, p. 165.—¹⁰ SAENGER, *ibid.*, 1896, p. 250.—¹¹ DUEHRSEN, *Archiv. f. G. u. G.*, XLVII.—¹² WERTHEIM, *Centralbl. f. G. u. G.*, 1895, p. 470.—¹³ JACOBS, *ibid.*, p. 767.—¹⁴ DUEHRSEN, *ibid.*, p. 768.—¹⁵ LUDWIG, *ibid.*, 1895, p. 228.

CLINICAL CASES.

CASE OF EXTRA-UTERINE PREGNANCY — OPERATION AT EIGHTH MONTH—CHILD LIVED SIX HOURS—PLACENTA REMOVED DURING SIXTH AND SEVENTH WEEK—NO HÆMORRHAGE—RECOVERY.

By DAVID HARDIE, M.D.

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Mrs. B., aged 32, consulted me on January 2, 1896, and gave me the following history:—She had been married fifteen years; had had two children, the youngest being 9 years of age; had a miscarriage at the fourth month, about eighteen months ago, and says she has not been well since. Her menstrual periods for the last few years occurred regularly, lasting as a rule from nine to ten days. In the beginning of June last she went about a week over her usual time; the discharge lasted fourteen days, and she observed a few small clots and something like a "piece of skin," the size of a penny. In the beginning of July menses again came on, but lasted only for an hour or two. A similar sign appeared a week after. This continued off and on nearly every day for the following two months, or till about the middle of September, at the end of which time she passed shreds like pieces of after-birth, which had a putrid smell. The discharge then nearly stopped, and immediately after she was seized with severe "crampy" pain near the navel, accompanied by vomiting and cold perspiration, lasting about three hours. She then sent for Dr. Hill, who thought she had had a miscarriage. A week later, and again

the subsequent week, there was a recurrence of these symptoms, which on each occasion lasted from seven to eight hours. Pain continued in the right inguinal region for about a fortnight, and she was unable to get out of bed for nearly three months. About the beginning of December she drew Dr. Hill's attention to a hard lump, felt in the region of the bladder, but somewhat more to the right side. Dr. Little then saw her in consultation, and expressed the opinion that she was pregnant. In this connection the following note, kindly given me by Dr. Hill, is of importance:—He "was called in to see her on September 16, and found her suffering from abdominal pain, with a temperature of 104°F. and a hard, wiry pulse, as if she was suffering from pelvic peritonitis. There was nothing felt over the abdomen, but *per vaginam* the roof of the vagina was as hard as mortar, and the uterus immovable. He ceased attendance in October, and when again called in, on December 10, found a large central tumour reaching to near the umbilicus."

Condition at Time of First Consultation.—A swelling could be seen and felt on palpation in the middle line, rising to just above the umbilicus. Foetal movements could be distinctly detected, but no foetal heart. The limbs could be made out very clearly near the upper and left part of the swelling, and seemed *very near the surface*. Beyond this fact, however, there was nothing from abdominal examination alone to lead me to suspect that the child was extra-uterine, or that the case was other than an ordinary one about the sixth month of pregnancy. Vaginal examination, however, at once showed that the condition of parts was not that of normal pregnancy. The os was soft and patulous, freely admitting the forefinger to the inner ring; a hard tender swelling was felt behind the cervix, not unlike that of a retroflexed uterus; in front and to the left of the cervix there could be felt high up, and with great difficulty, a hard body like the head of a child. On pressure being now made with the other hand over the abdomen, it was found that there was a distinct sulcus between the head of the

child and the uterus, into which the fingers in the vagina could be made to enter—in other words, there was a want of continuity, such as is found in normal pregnancy, between the cervix and the part containing the foetal head. This sulcus, indeed, was the only distinguishing feature of the case at this stage, but, taking into account also the history, it was sufficiently characteristic to justify the following query in my case-book :—"Pregnancy, is it extra-uterine"? If so, the retro-uterine swelling might after all be a retroflexed uterus. The introduction of a sound would have cleared up this point, but as there was no urgency I gave the patient the benefit of the doubt, and waited.

Subsequent History and Condition.—Occasionally during the next few weeks, or seventh month of pregnancy, she noticed a vaginal discharge, which was at first watery, and which afterwards became bloody, the blood coming away with a "gush," and inducing her to think she was to have a miscarriage. She was also seized at irregular intervals with severe "cramps," to the left of the navel, lasting from three to four minutes. Meanwhile, no change was observed to occur *per vaginam*, but it was noted that the abdominal swelling gradually assumed a more left-lateral position, practically filling up the hypogastric, together with the left iliac and lumbar regions. The diagnosis, as time went on, seemed very clear. The case was one of pregnancy, for the movements of the child were distinctly felt, though no foetal heart was heard. The pregnancy was extra-uterine, for, in addition to the important sign elicited during my first examination *per vaginam*, together with the history of the case, there was now superadded the highly important evidence supplied by the position of the child in the left iliac region. The only points that required to be cleared up were the position of the uterus and the nature of the swelling behind the cervix. Was the latter a retroflexed uterus, or did it consist of the products of a previous hæmatocele or cellulitis undergoing absorption? The sound alone could clear up this point.

Dr. Byrne now saw her, in consultation with me, and

after careful examination, corroborated my diagnosis. The sound passed nearly three inches in a direction upwards and slightly backwards in front of the sacral promontory, showing that the retro-uterine swelling was not a retroflexed uterus. It was now possible to form a very reasonable estimate of the position and relation of parts generally. I estimated that the child was lying in a vertical position in the left iliac and lumbar regions, the back of the child being towards the spine, the head over the brim of the left pelvis, and the limbs above, reaching to near the ribs; that the placenta occupied that part of the swelling to the right of the child directly in front of the uterus, and rising in the middle line to just below the umbilicus; and that the retro-uterine swelling was probably the remains of a previous hæmatocele formed in connection with primary rupture of the tube at the third month of pregnancy. With the exception of this latter point, which I did not attempt to elucidate, the others were amply verified in every particular during the subsequent operation.

I may here say that that part of the swelling along the middle line was supposed to be the placenta site, mainly by a process of exclusion. It could not be foetal, as the foetus was easily made out in the left iliac region, and it could not be uterine, as the sound showed that the uterus was not much enlarged, and lay towards the back of the pelvis. It therefore, presumably, could only be placental. Moreover, bimanual examination showed that it corresponded in touch with that of a placenta. No bruit was, however, made out.

Meanwhile the "cramps" were becoming more frequent and severe, and were not unlike the sharp pains of the first stage of ordinary labour, only more acutely painful. It should be noted that during these pains the foetal sac was felt by the hands to become harder, as though it were contracting like an ordinary pregnant uterus. The urgency of the case demanded immediate operation, as there might occur at any moment secondary rupture, and almost certain

death of mother and child. At this stage Dr. Bancroft also saw her, and concurred with our diagnosis.

Operation.—This was done at Miss Weedon's private hospital, "St. Clair," on February 26, Dr. Byrne assisting me, and Dr. Bancroft giving ether; Drs. Hill and Turner being also present. A vertical incision four inches long—afterwards extending to five inches—was made, as advised by my colleagues, over the most prominent part of the foetus, $1\frac{1}{4}$ inch to the left of the middle line, the upper extremity being on a level with the navel. The sac being opened along the course of the incision, the head of the child came into view. There was no liquor amnii. After extending the incision upwards the child was slowly extracted, the head being delivered first. It was a well-formed female child, apparently about the eighth month, and lived for six hours. The cord was tied about four inches from the placenta, and dropped into the cavity. The placenta was seen to the right of the incision, extending up to near the umbilicus, and could be traced down to the right and anterior surface of the uterus, with which it seemed to be connected, and from which it no doubt received part of its blood supply. No attempt was, however, made to handle it freely, or to ascertain its exact connections. It was enough that its removal seemed impracticable. The sac was extremely thin and fragile, and it appeared at first sight as if the child had been floating loose in the abdominal cavity, covered merely by the foetal membranes. Further examination, however, showed that the left fallopian tube was lying back on the omentum on a line with the umbilicus, and that it had been partly cut through in extending the incision upwards to allow of the exit of the child. Its lumen was sufficiently large to freely admit the forefinger, and its walls were hard and greatly hypertrophied. It was quite evident, therefore, that the sac was composed of more than foetal membranes, that the pregnancy was tubal in its origin, that primary rupture of the third month was extra-peritoneal, and that further development of the foetal parts

took place between the layers of the broad ligament, the anterior and posterior layers of which now constituted the sac proper, with the tube for its upper and inner boundary. It was most fortunate that the tube occupied this position, as it formed an excellent base for supporting the sac at its upper part, and for uniting it with the abdominal wall. The tube having been firmly attached by silk-worm gut near the middle of the abdominal incision, an attempt was made to stitch the remaining part of the sac to the wound. This, on account of the fragile nature of the sac, which tore very readily, was attended by the greatest possible difficulty. Ultimately, however, by the aid of reflected light, suggested and attended to by Dr. Turner, it was accomplished with the exception of a vertical tear to the left, which would not bear a suture, and through which the cavity of the sac communicated undoubtedly with the peritoneal cavity. This opening admitted the finger, but it was hoped that before the placenta could become septic, lymph would be thrown out in sufficient quantity to practically obliterate it. The result showed that such was the case. The exposed parts were lightly sponged with sterilised water, the upper half of the incision closed with silk-worm gut, a gauze drain inserted deeply and loosely into the sac, and the usual dressing applied. The operation lasted an hour, the greater part of the time being taken up with the sac, *and was completed with the loss of probably not more than half an ounce of blood.*

For the first twelve days she progressed favourably, as will be seen from the temperature chart. There was some abdominal distension that was greatly relieved on the third day by the passing of a large quantity of flatus. The bowels moved on the fourth. On the sixth day the gauze drain was removed. The wound was thereafter dressed twice a day, gauze being inserted loosely for a few days within the opening to admit of free discharge. The stitches from the upper wound and sac were finally removed on the twelfth day. At this stage she began to complain of feeling bilious.

and vomited two or three times, there being also some distension and tenderness over the lower abdomen. Ordered six $\frac{1}{2}$ -grain calomel powders at intervals of an hour, followed by Rubinat water. These had not the desired effect, but seemed rather to aggravate the sickness and vomiting, which had become so persistent that nothing was retained in the stomach. For two days she was allowed to take only sips of water, and nutrient enemata were given. The vomiting having now stopped, a purge of euonymin, colocynth and hysocyamus, advised by Dr. Byrne, who kindly saw her with me, was given with very satisfactory results. So far there was no attempt made to wash out the sac, as I was uncertain whether the opening into the peritoneal cavity previously mentioned in connection with the operation had closed. As, however, the temperature was running a somewhat septic course during the third week, I decided to attempt irrigation. This was done gently with warm boracic lotion through a soft rubber catheter, and, to my great relief, the lotion returned freely, carrying with it a quantity of dirty, reddish-brown coloured discharge. The temperature now ran a lower course, and I continued to irrigate daily, and, I believe, with benefit, right through the period of convalescence.

On March 18, a small piece of placenta that came in contact with the wound sloughed away, and was removed. Her menses also appeared, and continued for the usual period of ten days, during which time the breasts also became hard and tender. On March 21, another very small bit of placenta, together with the umbilical ligature, came away in the discharge. A week later the placenta seemed to be pushing its way gradually through the opening, and, on April 8, exactly six weeks after the operation, I was able to remove a very large piece, which had entirely separated itself. Another small piece came away on the 12th, and also on April 13. On the 17th, the remaining part of the placenta was again presenting itself at the opening, and removed. About an ounce of healthy pus oozed out after its removal, and it appeared to me that the sac was now

free from placenta. It will thus be seen that the placenta began to come away at the sixth week, and was entirely removed a little over seven weeks after the operation. From this time onwards the discharge lessened and lost its offensive character, the sac gradually closed up, and at the present time is a mere shallow sinus, showing every appearance of closing up at an early date. I may here note that from the fourth week onwards a mixture of quinine and iron was given, with apparently satisfactory results.

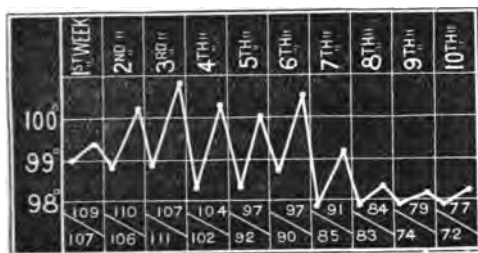
A glance at the daily temperature chart shows that the temperature for nearly a fortnight was almost normal; that during the next four weeks it ran a mild septic course, rising to 100° and 101° , and once or twice to 102° in the evening, but falling in nearly every instance to normal in the morning; that during the sixth and part of the seventh week it ran a lower course, and thereafter was normal. The first period coincided with the non-infected stage of the placenta, the second period with the infected and disintegrating stage, the third with that stage during which the placenta was being discharged, and the fourth period was attained when the placenta was entirely removed.

I have to express gratitude to my colleagues for valued counsel and assistance. An account of this case would also be incomplete without an acknowledgment to Miss Weedon for the very intelligent manner that she and her competent staff at "St. Clair" performed their duties through a somewhat trying period of convalescence. In connection with the many difficulties met with in the after-treatment, Miss Weedon displayed an amount of tact and skill in nursing always equal to the occasion, and largely assisted me in bringing this interesting case to a successful termination.

Remarks.—This case shows the value of not merely diagnosing extra-uterine pregnancy, but of ascertaining, if possible, the relative position of parts prior to operation. The abdominal incision was made in the left iliac region, not only because of its being the most prominent part, but specially because I could thus avoid wounding the placenta,

which there was reason to believe lay exactly along the middle line.

A point of interest, also, is the occurrence of menstruation a month after the operation, as if nature were satisfied with mere removal of the child, the placenta remaining *in situ*.



AVERAGE WEEKLY TEMPERATURE AND PULSE RATE.

Although this case has been successful, I am inclined to think, from the absence of symptoms during what I would call the non-infected stage of the placenta, that a long period of convalescence might have been prevented by removing the gauze drain twenty-four hours after the operation, and closing the wound. Should symptoms of sepsis subsequently arise, it would be an easy matter to re-open the sac, and meantime the patient would receive the benefit of the doubt. This course would, I think, be preferable to that of removing as much of the sac and membrane as possible, and leaving the placenta free in the abdominal cavity, because, should sepsis arise, it would most certainly prove fatal.

Statistics.—In a recent number of the *British Medical Journal*, Mr. Harrison Cripps says:—"Mr. Sutton records 29 cases of operation. In 16 of these laparotomy was performed after the death of the foetus, at about full term. The remaining 13 cases were operated on between the seventh and ninth month, the child being alive. The results are remarkable and instructive. The 16 cases in which the operation was performed after the death of the foetus all recovered, while in the 13 operated upon whilst the child

was alive eight died." So far, then, according to British records, only five patients have recovered that were operated upon whilst the child was alive. This, therefore, makes the sixth.

In a letter kindly sent some weeks ago by Dr. Worrall he informed me that he has operated on seven cases of extra-uterine pregnancy, with one death. One of these was operated upon at full term, after the death of the child, and the case was all the more remarkable as the ectopic gestation was in conjunction with a normal intra-uterine pregnancy. Eakins is the only one, as far as I know, in this country who has operated upon a case in which the child was alive and near the full term, and the woman died on the seventeenth day.

A CASE OF UTERUS BICORNIS SEPTUS.


By FRED EDGE, F.R.C.S.

Surgeon to the Wolverhampton Hospital for Women.

B. E., aged 34, consulted me in the out-patient department of the Women's Hospital on June 29, 1896, for metrorrhagia after abortion.

The sexual and menstrual history is as follows. She began to menstruate at 13, menstruating every twenty-eight days, the flow lasting three to four days, and was not free. She always suffered from dysmenorrhœa. She married three years ago. She became pregnant, and was extremely sick and very ill during the whole of her pregnancy. A living child was born nineteen months ago. She was attended in her confinement by a midwife, and the labour presented no special feature. Labour came on at 3 a.m., and the child was born at 1 p.m., the duration thus being ten hours. The after course was good, and she had no attention after the second day owing to the midwife having fallen ill.

Nine weeks ago she had an abortion at about the third



month, and since then she has lost heavily and almost continuously. The foetus came away a week before the after-birth; she was not under any treatment for the abortion.

The previous history is as follows :—

“Both parents dead; mother died of heart disease at 35. She has no brothers or sisters. She had scarlet fever at the age of 9 very severely, and this was immediately on the top of an attack of measles. Her general appearance is pale and careworn. She suffers from flatulent distension at times, and from shifting abdominal pains. The heart is large, apex displaced slightly outward; the left ventricle beats strongly, giving firm impulse; there is a systolic murmur heard best over the aortic area; the whole pointing to obstruction at this part. She often fainted during her first pregnancy.” There was some slight bronchial catarrh. The liver and kidneys presented nothing striking. The urine was acid, contained no albumen, but some phosphatic cloudiness on heating which disappeared with the addition of nitric acid. She had had piles for nine years; these were chiefly external and not large. The vulva and vagina were lax and moist with sanguineous fluid. The uterus appeared retroflexed, and a large mass was felt on the left side of it, and apparently closely attached to it; this was firm and of rounded contour. This mass was thought to be due to some inflammatory mischief in the left tube and ovary, together with some thickening in the broad ligament. The patient was taken to the hospital and placed under anæsthesia for the purpose of clearing up the diagnosis and at the same time of removing the cause of the metrorrhagia.

On examining under an anæsthetic, it seemed that the uterus was very peculiar in its form. On passing the uterine catheter to wash out the uterus, I made out the presence of the other mass which I had perceived in the out-patient room, but this was on right side, that is, the catheter passed into what I had previously looked upon as the mass, and I had now to account for the body to the right of this. Bimanually I felt that the two bodies united at the cervix, and I could pass

sounds into both at the same time, and the septum was visible, dividing the cervical canal into two. With one finger in the rectum it was possible to touch the fingers of the outer hand, above the cervix and between the two bodies. My colleague, Dr. Lycett, also satisfied himself of the facility of doing this. The presence of a vesico-rectal band was not made out. The ovaries are one to each horn, and present nothing striking.

The curette removed loose flocculent tissue from the left larger side, and it is probable that this side had contained the abortion. This fact is the only evidence as to the side which had carried the full-time pregnancy. The cervix was not lacerated, thus showing its normal consistence. The cavities measure— $3\frac{1}{2}$ in. the left, and $3\frac{1}{4}$ in. the right. The left body is thicker and more bulky and more fixed in its position. The septum comes down to the os externum, just failing to reach it by 0.5 c.m. ($\frac{1}{8}$ in.). The os is not double, but since these observations are made after the birth of a child at term, it is possible that the external os may have been double originally, and may have lost this form by the destruction of the margin of the septum. The uterus is thus proved to consist of two bodies and one cervix which is divided by a septum, thus giving two complete uterine cavities.

Adopting Fürst's classification of malformation of the uterus, this is a case of uterus bicornis septus, or uterus bicornis bicameratus of Kussmaul. The condition is due to a developmental fault at the end of the second month of foetal life, and this fault consists in the non-union of the Müllerian ducts above the cervix. This produces the uterus bicornis, and when the septum in the cervix also fails to be absorbed, we get the uterus bicornis septus or bicameratus.

Winckel says that both sides are usually well developed (as in this case). The cervix is thicker than the horns, which are fine and cylindrical (in this case the horns are fully developed). The anterior wall of the uterus is concave and the posterior convex. When the vagina is double, the

vaginal portion of the cervix is also doubled. The length of the uterus is usually less than the normal one. Between the horns a fold of peritoneum unites the bladder and the rectum. Although some subjects have had menstrual troubles and been sterile, others have been repeatedly pregnant.

Regarding the recto-vesical band and its etiological relations to the malformation, Winckel does not think it likely that the band is caused by peritonitis during foetal life, and that it is then a hindrance to the union of the two halves of the uterus; because no signs of peritonitis have been found, and also, since the two horns are generally so fully developed, any inflammatory mischief is out of the question.

TRANSLATION—(ABSTRACT).

UTERINE FIBROMATA IN RELATION TO ACCOUCHEMENT.

By Dr. P. PEUCH OF MONTPELLIER.

*(Continued from Part xlv., page 622.)**Archives de Tocologie et de Gynécologie*, vol. xxii., No. 11, 1895, p. 862, and *Gazette des Hôpitaux*, August, 1895.

THE following is an enumeration of those errors in diagnosis most likely to occur, together with the best means of avoiding such mistakes.

(1) As has been said, the fibroma may be mistaken for the foetus or part of it. Amongst this class must be included those instances in which the patient has been supposed to be on the eve of her confinement, although not in reality pregnant, as well as those in which the fibroma has been taken for some kind of presentation other than that which really existed, and also those in which the presence of *two* foetal bodies has been inferred.

In all cases of this group it is due to insufficient or superficial examination or investigation that such mistakes arise; the finger, in its exploration, feeling the protuberances and furrows sometimes met with on the surface of uterine fibromata, and taking them for what did not exist, but what it was natural to anticipate. Picaud¹ mentions the case of a woman, under the care of M. Bouillard, who was supposed to be pregnant; she had lumbar pains as in abortion, the neck was effaced. Capuron, who examined, declared he

¹ Picaud, *Bull. de la Soc. Anat.*, 1847.

felt the head of a foetus and the triangular fontanelle. After death it was found that the woman had a fibromatous uterus. Such mistakes can easily be avoided if, instead of drawing hasty conclusions, or basing opinion on *one* indication of this or that presentation, a careful and thorough examination be made. If need be, the introduction of the hand into the genital passages will suffice to remove all doubts. For instance, in a case of fibroma situated at the level of the body of the uterus, when palpation reveals the existence of *two* foetal masses and the birth of twins might be anticipated, it must be borne in mind that the prominences occasioned by foetal members *disappear* when the uterus contracts, while the lumpiness of fibromata grows greater under the same circumstances.

(2) Fibromata may be confused with other kinds of tumours.

(a) They may be mistaken for ovarian cysts; if the cyst be abdominal, diagnosis will be relatively easy. Palpations will indicate the presence of two tumours completely independent, the one being the gravid uterus, the other the ovarian cyst, a more or less movable, indolent, rounded and regularly circumscribed body, attached to one side or the other of the abdomen. When the tumour is intra-pelvic, diagnosis is less easy, since the compression to which it is subjected during parturition may cause it to assume the characteristics of a solid tumour. Tarnier admits having once mistaken an ovarian cyst for a fibrous tumour, and Baudelocque instances a cyst in the thickness of the tube, which at the moment of accouchement was so hard that he took it for an exostosis.

The opposite error is easily accounted for, by the modifications effected in fibromata by pregnancy and accouchement, when, becoming saturated and softened, they exhibit in some cases a fluctuation which has caused them to be mistaken for cysts. Cazeaux refers at length, in his book, to such a case, where Paul Dubois and Danyau had believed in the existence of a cyst, and had advised perforation.

But as the consistency of an ovarian cyst becomes less solid in the interval between the pains, if the exploration is made at that moment, care being taken not to exert too much pressure, its degree of elasticity can be perceived.

Anamnæsia gives important indications in cases of ovarian cysts which have existed before the commencement of pregnancy. There are sometimes irregularities of menstruation, dysmenorrhœa, or amenorrhœa, while in cases of fibrous tumour, menorrhagia and metrorrhagia are the rule, and may, moreover, persist during the course of pregnancy.

In doubtful cases it is necessary, in order to establish diagnosis, to effect a perforation with a fine trocar, or with an aspirator.

(b) Fibroma of the neck may be mistaken for cancer of the neck. The latter is irregular in shape, easily lacerated by the finger, bleeding at the least touch, often extending to the vaginal walls, and giving rise to an offensive discharge. On the other hand, fibromata of the neck are usually rounded, regular in shape, very much circumscribed, causing no discharge, and having little effect on the general condition.

(c) Fibromata, osteomata and enchondromata of the pelvic walls, may be mistaken for fibrous tumours of the uterus, diving down into the pelvic cavity. In these cases it is most important to ascertain the point of implantation of the tumour, exploration of the whole pelvic cavity by means of introducing the hand into the vagina, and also rectal palpation are of the greatest assistance in determining whether the uterus and the tumour are quite independent of one another.

(d) Bowel distended with fæcal matter and distended bladder have been mistaken for real fibromata of the uterus, and they must be freed of all contents in order to avoid such an error. Braxton Hicks gives an instance of a mistake of this kind.¹

¹ Braxton Hicks, "Obst. Trans. of Lond.," 1874, p. 273.

(e) Again, there is a possibility of mistaking placenta prævia for a fibrous thickening of the uterus. Loss of blood during accouchement may accompany the presence of a fibroma as it does that of placenta prævia, and palpation may reveal the existence of such a tumour on the neck of the uterus.

Hæmorrhage during pregnancy, resulting from the existence of placenta prævia, is seldom seen till the last three months of the condition, and is not painful. Hæmorrhage occasioned by the presence of a fibroid tumour of the uterus is, on the contrary, continuous throughout pregnancy, and gives rise to uterine colic.

Finally, on palpating in cases of placenta prævia, the finger meets with a softish mass of doughy consistency, on a level with which will be recognised the lobulations due to the placental cotyledons.

(3) The existence of the fibroma may be unrecognised, as instanced in a case of his own, reported by Charpentier, where the diagnosis had suggested the presence of a dead, putrifying foetus, with consequent emphysema, and swelling up of the dead foetus. The autopsy, however, revealed the existence of a huge fibrous body starting at the junction of the body and neck of the uterus, which had baffled all investigations.

According to Marquézy,¹ who has pointed out the special difficulties attendant on such cases, this error in diagnosis is most frequent when the tumour is inserted on the posterior wall of the uterus.

The natural idea is, that the complication is due to a contraction of the pelvis, and in particular to a generally contracted pelvis. The tumour in front of the foetal part is not discovered by merely inserting the finger into the vagina, nor, in spite of good contractions, does the foetus engage in the superior inlet, while the head—if it be a vertex presen-

¹ Marquézy, "Th. de Paris," 1891.

tation—is much flexed, as is usual in cases of general pelvic contraction (Bonnaire¹). Careful vaginal palpation will soon make clear the true state of things, especially if, bearing in mind the possibility in question, intra-uterine palpation is resorted to, when the fibroma springing from the posterior surface of the uterus, and hitherto ignored, will be felt.

When the presence of the tumour is not recognised, the dystocia in reality due to its existence may be attributed to shortness of the cord, an error of which Hamon de Fresnay quotes an example. But when the cord is too short the process of accouchement is entirely different, since, after the rupture of the membranes, the head after entering the pelvic cavity is prevented from passing further, and is drawn up after each contraction almost as high as at first, while at the moment of contraction the patient feels a sharp pain at the insertion of the placenta, and there is always a risk of this becoming detached in consequence of these jerks, and causing flooding. Here, again, is an instance in which doubt can only be removed by a careful and extended internal investigation.

Treatment.—The indications in individual cases being of the most varied character, the means employed to attain safe delivery in cases where accouchement is complicated with fibromata, must necessarily be equally varied.

In the earlier part of the paper reference has been made to the different ways in which the presence of a fibroma may adversely influence delivery. It is unnecessary to go into any detail on the treatment of such cases of complication as arise from inertia of the uterus, or unusual presentation or position of the foetus. But when dystocia is due to the presence of a fibrous body in the pelvic cavity it is a matter of much greater delicacy. So long as the life of the mother and child is not menaced, the *expectant* is the best course to pursue, on which point Lefour is very definite; and this course is often justified in the result by the spon-

¹ Bonnaire, quoted in "Th. of Marquézy."

taneous expulsion of the foetus. But when it is clear that nature is incapable of overcoming the pelvic obstacle, it is time for the accoucheur to come to the rescue.

The chief thing to be secured is the withdrawal upwards of the fibroma into the abdominal cavity near the superior inlet. To facilitate this the patient is placed in the genu-pectoral position, and the hand is introduced into the vagina, to exercise a fairly strong pressure on the fibroma, between the contractions. Fritsch¹ says he has several times succeeded by employing this position in freeing a passage for the foetus when other surgeons had endeavoured to do so in vain, as long as the dorsal decubitus was maintained, and after they had in consequence decided that Cæsarean section was inevitable.

If the tumour situated low down on the neck or inferior segment is forced forward by the foetus to the vaginal opening, an attempt should be made at extirpation. Ablation will be differently effected according as the tumour is pediculated or interstitial. In the first case the means to be made use of are torsion, ligature and excision; in the second, the incision will be made on the most prominent part of the tumour and its enucleation effected by the fingers or by the aid of a blunt spatula. Where this method is suitable to the case, its results are excellent. Out of the twelve cases of ablation of fibromata during accouchement, reported by Chahbazian, there was but one death, and that being due to septicæmia, points the blame to the operator, and not the operation. But, unfortunately, it is not always possible to push up a tumour as far as is desirable, and to effect its ablation is impossible, except in rare cases. Hence, as the mechanical obstruction cannot be removed, the treatment must follow the same lines as if there were pelvic constriction.

Where there is room between the pelvic wall and the tumour for a foetus to pass without being too dangerously

¹ Fritsch, *Traité Clin. des op. Obstét.*, 4th ed. 1892, p. 236.

compressed, and where there is a living infant, it has been a question whether it be best to employ *forceps* or *version*. Opinions on this point seem very equally divided. Depaul, Charpentier, Susserott, Lefour, Chahbazian, are all in favour of using the forceps. Tarnier pronounces for version, as he considers it helps to dilate the passage through the neck, to remove the tumour more and more from the centre of the cavity and to force it aside or in an upward direction. Fritsch is of Tarnier's opinion.

By grouping the figures of Susserott, Tarnier, Lefour, and Chahbazian, we get the following results :—

Cases where forceps were used.	Living Mothers.	Living Infants.
57	38, or, 67 per cent.	26, 44 per cent.
Cases of version.	Living Mothers.	Living Infants.
29	7, or, 25 per cent.	7, 25 per cent.

which tells in favour of the employment of forceps.

But it is more than probable that the above results are vitiated by the worst cases, *i.e.*, those in which the operators feared the obstacles to the introduction of the blades of the forceps might be too great, and so decided upon the other method, which thus does not fairly show what may be expected from its adoption.

There is no question that version by bringing the pelvic portion of the foetus into the free space, does facilitate its passage across the genital axis, and therefore, since it is not possible truly to estimate the value of the above statistics, it would be unwise to reject on their account an operation which may permit of a safe termination to accouchement.

Where the infant is already dead, the mutilating operations of basiotripsy and embryotomy may be adopted. The former, has been shown by Ribemont-Dessaigues, to be not only applicable in cases of cephalic presentations, but also in cases of breech presentations. The most exhausting labour can always be terminated by means of the basiotribe when its prolongation is due to myoma of the lower segment, but both these mutilating operations (and especially embryotomy in cases of shoulder presentations), are at times not

devoid of considerable difficulty, and may gravely endanger the life of the mother. The mortality, indeed, of these operations, performed under such unfavourable circumstances, is 50 per cent., or as will be seen later on, exactly the same as results from Porro's operation. Maygrier says that the chief danger of any form of embryotomy lies in the irritation of the tumour and the adjacent soft parts, unavoidable during operation.¹

In such cases, if the child be living and its extraction by the usual passages would endanger its life and its mother's, recourse can be had to Cæsarean section, or to Porro's operation as a last resort, when embryotomy would be for any reason the more serious risk.

Here it may be well to consider, whether, short of proceeding to the above extremes, it may not be possible by means of symphysiotomy to secure a sufficient enlargement of the natural passage to admit of the extraction of the living infant. As yet, the data on the subject are so scanty that the writer of the paper has only been able to quote four cases. The first, that of Novi, mentioned by Maygrier, seems to have been the first of the kind, its results are not stated ;¹ in Maygrier's own case the operation was unsuccessful, and basiotripsy was resorted to, but, owing apparently to previous want of antiseptic precautions before entering hospital, the patient died twenty-one days afterwards. In the case of Lepage,² the success was complete, and a similar success attended that detailed by Rein,³ of Kiel.

What deductions can be drawn from these few observations ?

Lepage considers symphysiotomy should not be restricted to cases in which there is defective osseous structure of the pelvis, but may be employed in cases where the cavity is obstructed by a uterine or peri-uterine fibroma, even when the tumour is an integral part of the walls of the cavity.

¹ Maygrier, *Prog. Med.*, Avril 15, 1893.

² Lepage, *Ann. de Gyn.*, Avril, 1895.

³ Rein, *Ann. de Gyn.*, Sept., 1893, p. 221.

The author of the paper does not agree with him, he thinks this operation is properly limited to cases of actual pelvic contraction, where it is possible to decide precisely whether or not the intra-pelvic enlargement within safe limits will or will not give the additional space required for the passage of the foetus. In cases where it is only approximately possible to gauge how much the presence of the tumour reduces the pelvic capacity, he considers that to perform symphysiotomy is to incur a serious risk in the endeavour to obtain very uncertain results—as witness the case of Maygrier already mentioned.

In his opinion, in cases where the pelvic passage is absolutely blocked, or where the foetus is dead, it is infinitely better by means of abdominal section to remove the foetus, and with it the uterus; thus getting rid at one and the same time of the tumour, and of so grave a source of infection as the uterus is apt, under such circumstances, to become.

It is to the *defectueuses* conditions under which they are generally carried out that the high mortality of Cæsarean section and of Porro's operation is due. Of the 26 cases reported by Lefour, there were 22 deaths, which gives a percentage of 81.48.

In Pestalozza's *Mémoire*, published in 1890, 18 new cases are mentioned, which were performed under the rules of antisepsis as modified by Saenger; there were, nevertheless, 12 deaths, or a percentage of 66.¹

The results of Porro's operation in cases of fibromata are less unfavourable; in 18 cases (17 reported by Pestalozza, and 1 by Freund), there were 9 cures and 9 deaths, or a mortality of 50 per cent.

There can be no doubt these results will be improved upon when the operation is performed only in cases where the labour has from the moment of intervention been antiseptically treated, and where the patient has not been allowed to become exhausted by protracted and fruitless travail.

¹ Maygrier, *Lécons de Clin. Obstét.*, p. 132.

However it may be, the foregoing figures, no less than common sense, show the superiority of Porro's operation, and to it must be given the preference in most cases, where the withdrawal of the foetus by the natural channels is impossible.

It may be well to mention, as of advantage to the operator, that the employment of the elastic extra-peritoneal ligature of the pedicle gives the greatest security against hæmorrhage and septicæmia.—(Kaltenbach, Hegar, Pozzi).

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PUERPERAL INSANITY.

By DR. H. DAGONNET.

Archiv. de Tocologie et de Gynécologie, vol. xxi., No. 10, p. 751.

THE puerperal condition is noticed by every writer as a somewhat frequent cause of mental alienation. It is worth while to ascertain what should be understood by the expression "puerperal condition," above all when it is a question of investigating the pathogenic part which is played by this condition in developing cerebral affections.

To speak precisely, the puerperal condition comprises only that group of functional and organic modifications which supervenes amongst women during and after parturition until the re-appearance of the menses, or until lactation is established. It appears to us that this is the most rational method of defining the "puerperal condition." Nevertheless, from the point of view of our special subject, we admit of its subdivision into the three following periods : (1) the period of gestation ; (2) that of parturition ; (3) that of lactation. The following proportions have been observed (Krafft-Ebing) as to the frequency of mania during these different periods :—

Pregnancy	...	...	3.1 per. cent.
Puerperal condition	...	...	9.2 " "
Lactation	...	...	5.6 " "

First Period of Puerperal Insanity. Pregnancy.—If at the commencement of this condition certain nervous phenomena make their appearance they are yet more

observable as the pregnancy advances, and particularly during the last three months, when the blood has undergone important modifications.

On the one hand, fibrine is increased and approaches the volume met with in inflammation ; on the other, there is a diminution in the quantity of globules, and of albumen, the serum becomes less rich in solid constituents, there is a tendency to anæmia, and a predisposition to dropsical affections.

The chloro-anæmic changes which pregnant women undergo, and the sympathetic influence exercised by the uterus on the nervous system, partially explain the morbid phenomena which may then be observed, such as headache, neuralgic pains in various parts of the body, gastralgia, eccentricity of appetite, more or less persistent vomiting.

Coming to the facts, properly so called, we can divide the phenomena manifested during gestation into three groups or three grades. In the first and the least grade there are rather frequent cerebral troubles, but without any conspicuous change in the phenomena of volition or of judgment. We may observe certain eccentricities of character, an exaggeration of general and local sensibility ; the patient may show caprice or undue fear, but reason and will are both intact. Nothing is more common than to hear women say in all stages of pregnancy, "Were I to follow my inclination I should do so and so, but I know it would be bad for me and for my baby."

In the second grade the will and the judgment undergo a change, but only a partial one. The woman then does what she ought not, either because she does not realise that she is doing wrong, or because she cannot prevent herself from doing it.

It is thus that women who have committed such offences as theft, incendiarism, &c., have been acquitted, as also those guilty of assault, homicide, &c. They have been let off when they have broken the laws of honour and honesty, for the sole reason that they were pregnant. But this is just where exaggeration begins.

A pregnant woman often has longings so intense that they become obsessions. Thus it is incontrovertible that a woman during gestation may sometimes have strongly marked impulses of sympathy or antipathy, but the question is, are these impulses stronger than the ruling power of the reasoning and reasonable will ?

A young married woman had an invincible repugnance for her husband, but was conscious of the distress she caused him ; she was not for that (dislike to him) one whit in love with any other man. This repugnance came to an end with her pregnancy. It is of no use to detail the desires exhibited impatiently and eagerly by pregnant women, but the will has never been sufficiently upset by these so as to allow of any injurious act, such as robbery or manslaughter. A woman retains quite sufficient will-power to resist when it is her duty to do so.

In the third grade the faculties are generally (and no longer specially) upset ; this is insanity, with its degrees and variations.

According to Marcé¹ that form of mania which seems to be connected with the process of gestation, or to be thereby excited, rarely commences before the fourth month, after which it gets progressively worse, while the sympathetic perturbation of the mental faculties—very noticeable in the early months—usually grow less till they disappear. According, further, to this author, the predominant form of alienation would seem to be that of melancholia. Schmidt gives the following proportions for the forms of mental alienation which are consequent on pregnancy.

52·9 per cent.	...	Melancholia.
21·3	„ „	Mania.
10	„ „	Systematic chronic delirium.
5·8	„ „	General paralysis of the insane.

Among the many facts which Marcé has had the opportunity of studying in this connection, he finds but a very

¹ Marcé, "Traite de la folie des femmes enceintes," Paris, 1858.

small number of cases in which confinement puts an end to the intellectual trouble which has come on during pregnancy; more often indeed, the trouble is increased, and melancholia changes into a more or less violent condition of mania; abortion proposed as a means of cure for the insanity of pregnant women ought, therefore, to be severely condemned.

Dr. Cérise had already protested against this practice of causing abortion which he had seen in use in England. In the case which he was able to observe the patient succumbed to the after effects, without the slightest amelioration of the mental condition having shown itself.

As to the good effects of pregnancy on mental disorder, admitted by several authors, it is open to great conflict of opinion. Esquirol considers the cure of insanity by marriage and accouchement to be exceptional; he says he has on the contrary seen many cases of insanity not merely persist, but grow worse under such conditions.

Our own observations do but confirm us in the above opinion. We recall the case of a young girl suffering from nymphomania, who, after her discharge from the establishment at Stephansfeld on improvement, became enceinte. This poor creature found her insanity aggravated by the fact of pregnancy and accouchement.

The psychoses which arise in the first stages of pregnancy have a less serious prognosis than those which come on later. Their duration is usually for several months, and relapses are frequent in succeeding pregnancies.

Second Period of the Puerperal Condition. Puerperal Insanity properly so called.—The puerperal condition properly so called includes not merely the act of the expulsion of the foetus, but also the local or general modifications which supervene on confinement until the time when the generative organs have resumed their normal functions, suspended by the process of gestation.

Puerperal alienation, strictly speaking, is that which develops in the four or five weeks immediately subsequent to accouchement, till the regular return of the menses, or

until the time when lactation has become a true physiological condition, if the woman suckles.

It is unnecessary to enumerate the *causes* which predispose women to alienation during the puerperal period; the excruciating pains of the process of child-bearing, the anxiety which accompanies them, the impatience which at this time seems to overmaster women, often even impulses of anger, which it seems they cannot restrain—such are powerful provocatives of cerebral excitement. If to the foregoing we add that excessive need for repose, to which women in child-bed are predisposed, which is every moment broken by fresh pains, the deeply anæmic condition and the hæmorrhage which may supervene on labour, it is easy to gather how numerous are the morbid influences which may arise to aggravate this particular liability.

“During labour,” says Prof. Naegelé,¹ “an important modification takes place in the entire nervous system of the patient, observable in the changes in character and in the emotions by which she is agitated. The most intelligent, the bravest of women belie themselves at such times, and become pusillanimous. The physiognomy is altered, the eyes haggard, the gaze fixed; but it is specially in the third and fourth stages of labour that this condition assumes the character of a true attack of mental alienation.”

According to certain authors, in normal confinements a form of delirium may be seen to come on quite suddenly, and to persist for hours together till the moment of the dilatation of the neck of the uterus, or till the head has emerged.

This passing delirium exhibited during accouchement, and often directly after, has been designated by certain doctors transitory mania (*paraphrosyne*).

Klug gives particulars of the case of a peasant woman admitted to the hospital in Berlin, who was seized after a troublesome confinement with a most violent form of agita-

¹ Naegelé, *Traité pratique de l'art des accouchements*, 2e ed., Paris, 1880.

tion, so that she tried, the moment it was born, to get hold of her infant to strangle it. This condition lasted about four hours, then she suddenly recovered, as if aroused from a dream, and asked her nurse to tell her what had been taking place. It is easy to understand how great are the difficulties besetting the true appreciation of such cases for the purposes of legal medicine.

The process of child-bearing, its duration, and difficulties, the acute suffering which accompanies it, the more or less profuse hæmorrhages which occur, exercise, no doubt, a powerful influence upon the development of the predisposition to alienation ; but the malady is induced in a far different manner by the action of mental impressions, worry, or annoyance, shame, distress, jealousy, &c. ; these are the usual causes indicated by writers. Esquirol has found that influences which affect the mind are four times as numerous as those which have a physical effect. Amongst physical causes have been mentioned divergence from regimen (irregular diet ?) and the shock of cold, which might have produced the suppression of the lochia.

Heredity plays a large part in the production of puerperal insanity. Burow has sought to show that at least half those women who are so attacked exhibit an hereditary tendency thereto.

According to Dr. Helft (of Berlin), the proportion would be 39 per cent. Of thirty patients under my observation at Stephansfeld who became insane as a consequence of confinement, fourteen had insane relations, that is to say, about 46 per cent.

Campbell-Clark¹ is very emphatic on infection, which he holds to be one of the causes which may produce, even without any predisposition, puerperal psychosis.

This toxæmia may result : (1) from the diminution, modification, or even the stoppage of the secretions and

¹ Campbell-Clark, "Pathology of Puerperal Insanity," *Four. Med. Science*, July, 1887.

excretions of the organism (bile, intestinal juice, urine often albuminous, lochia, milk) ; (2) from absorption of septic matter, due to the numerous affections of the uterus following the confinement ; (3) from the effects of fermentation ; from new or accidental intoxication, typhus, scarlatina ; or from the undue use of alcohol, chloroform, &c. Dr. Idanoff¹ (of Moscow) considers the theories of Hansen, in Germany, and of Cramer (of Prague) as too exclusive, with reference to toxæmic action as a cause of puerperal insanity. He thinks the chief cause of the condition is to be found in the mental emotions which take effect upon the feminine organism while this is enfeebled both as to nervous and physical power in consequence of confinement. Great losses of blood must, according to Idanoff, be regarded as an etiological factor of importance specially common among the inhabitants of country districts and the poor classes in large towns. When there has been profuse hæmorrhage, he says, a strong emotion is sufficient to provoke the psychosis, particularly if the patient is predisposed to mental maladies.

To sum up : according to this writer, the psychoses observed in the course of the puerperal condition have varied causes, which may be divided into two groups : (a) predisposing causes ; (b) producing causes. In the first category should be placed : (1) heredity, which is of very great importance, since it is observed in 56 per cent. of the cases ; and (2) the complicated influences of first pregnancy and first confinement. Compared with the influence of after confinements, that of the first confinement is perceived in 45 per cent. of cases of puerperal psychosis—*i.e.*, in almost half the cases.

In the second category, infection should be set in the front place ; but it must be noted, as Campbell-Clark points out, that it may proceed either from the uterus or from other organs, as the bowels, the intestines, &c. Thus 70 per

¹ Idanoff, "Rapport présenté à la Soc. de Psychiatrie de Moscou" Jan. 17, 1892, in *Ann. med. Psych.*, Avril, 1895.

cent. of the cases are due to infection ; but of this number, the infection was derived sixty-six times from the uterus, and four times from the bowels. In more than half the cases, mental emotions of greater or less intensity were concurrently experienced.

It is desirable to note, as Dr. Idanof has done, that according to the reports of lying-in hospitals, the proportions of puerperal troubles of the uterus reaches a mean of from 8 to 9 per cent. If we consider the total number of confinements, it will be seen that a very large number of women are attacked by fever, and generally by puerperal infection, and yet that the cases of puerperal psychosis are somewhat rare. Hence it would seem that mental emotions must be considered as exercising a powerful action, since infection by itself would not have sufficed, in the majority of cases, to determine the psychosis.

However this may be, it is indispensable to protect the patient during the puerperal period quite as much from all cause of infection as from all mental emotions ; and when the psychose has arisen, it is of the utmost importance to proceed to gynaecological examination in order to elucidate the etiology of the case, and to investigate all the other organs with care, since the causes of infection may have their origin in a large number of external organs.

Commencement of Puerperal Insanity.—It is generally from the fifth to the tenth day after confinement, when the secretion of milk is going on, that the outbreak of puerperal insanity is observed to take place. As premonitory symptoms, we find occurring at a greater or less distance of time before the malady declares itself, extreme irritability, insomnia, headache, eager looks, animated face, expressing already some restlessness ; the secretion of milk diminishes, or is arrested ; there is constipation.

This condition may or not be accompanied by feverishness ; sometimes the pulse remains feeble and quiet, sometimes it is light and quick. The skin may be warm and moist, but it is above all the head which is affected by the

higher temperature. At times hummings in the ears are complained of ; the tongue is white, the abdomen remains flexible ; the patients are at first sulky, or discontented, silent, and evince indifference with regard to their infants. Then the delirium becomes rapidly more marked. When it takes on a grave form, often fatal, the tongue becomes dry and covered with sordes ; the secretions cease abruptly ; the patients lapse into a condition of indifference, of stupor, and soon of coma, speedily inducing death.

Forms of Alienation arising from Puerperal Causes.—The greatest diversity of forms have been observed in puerperal insanity. In order of frequency we find, first mania, next melancholia, and then the different varieties of systematic delirium. That form of dementia which immediately supervenes on the condition is rather rare. Esquirol has only noticed it eight times in ninety-two cases. Schmidt,¹ quoted by Kraft - Ebing, has found the following proportions for the forms of mental alienation occurring in puerperal insanity, properly so called, that is to say, in consequence of confinement.

47'0	per cent.	...	...	Mania.
37'9	"	...	...	Melancholia.
5'5	"	...	...	Systematic delirium.
5'5	"	...	...	Stupidity (acute dementia).
1'4	"	...	...	" Folie circulaire " (alternating mania).

According to Fürstner, hallucinations are so frequent that these might at least be called hallucinatory insanities. As to the melancholia cases, Schmidt makes it appear that side by side with the hallucinations, and the attacks of inter-current suffering, a condition of unconsciousness is observed, the trance state, the state of distraction, and perturbations of the memory. "What strikes one," says Kraft-Ebing, "is the

¹ Schmidt, *Arch. of Psych.*, vol. xi.

character of the dementia, and the deep disturbance of the consciousness which result from exhaustion."

Insanity, to speak accurately, does not present under these circumstances characteristics differing from those usually observed ; nevertheless the disorder of ideas is more intense, the general excitability is more violent, than is noted in the generality of instances, and is more often complicated by dangerous irresistible impulses and erotic ideas.

The patients yield easily to the performance of acts of alarming violence towards their newly-born infants, acts having their reason in the perversion of the maternal instinct. Their talk is obscene, they try to uncover themselves, &c. When the acute stage passes off, it is common to notice heaviness of the head, a more or less marked change in the features, and a kind of general *malaise*.

Melancholia has also seemed to us, in the greater number of cases, to present more sharply defined characteristics than usual. The physiognomy wears a remarkable expression of suffering, the face is pinched and the features greatly altered. The perversion of natural sentiments, and in particular the perversion of the maternal sentiment, the homicidal impulses, and the tendency to suicide, have all been observed in melancholia as in the mania of newly confined women.

Prognosis.—In the majority of cases cure takes place quite soon ; it is not unusual to see it preceded by the restoration of the physiological functions to their normal state. Melancholia is of all these affections the gravest, and that which lasts longest. It is characterised by a tendency to fall into stupor, to perform impulsive acts, such as murder, suicide, and the like.

Third period of the puerperal Condition ; period of lactation ; insanity of nursing mothers.—The insanity of nursing mothers is one half as frequent as that of newly confined women ; but as Marcé bids us note, by no means all women suckle their infants, and this considerably diminishes the importance of the comparison. It is a strange circumstance, that all the cases of insanity produced during lacta-

tion naturally divide themselves into two categories, the one class being produced during the six or seven first months of lactation, the other class after at least eight months of suckling. This should be an important circumstance from an etiological point of view, for if the facts of the first group seem to be connected with the puerperal condition proper, the others are connected with the exhaustion of the forces which results from too prolonged a course of suckling.

Thus it is, that in this last case we find the patients usually exhibit the signs of anæmia, and of intense debility.¹

Schmidt has found the following proportions :—

42°	per cent.	...	...	Mania.
40°	"	...	...	Melancholia.
6·7	"	...	...	Acute dementia.
3·4	"	...	...	General paralysis of the insane.

The psychoses develop themselves tardily—not before the third month ; the prognosis is not unfavourable, though graver than in cases of true puerperal insanity ; their mean duration is nine months. Finally, according to Krafft-Ebing, depression-forms, with hallucinations of hearing, are more frequent than the maniacal developments, and offer naturally a more serious prognosis.

Abortion.—Insanity consequent on abortion, according to Krafft-Ebing, should be considered as puerperal insanity. It is characterised by multiple hallucinations, specially visual ; convulsions are equally frequent. The prognosis is favourable. Ripping allows as the duration of this form of psychosis consequent on abortion, a mean time of five months.

Eclampsia.—Olshausen² has specially studied the connection between eclampsia and puerperal psychosis. The latter arises in 6 per cent. of the cases of eclampsia—thirty-one cases in five hundred and fifteen of eclampsia. Among

¹ Marcé, "Traité de la folie des femmes enceintes, des nouvelles accouchees," &c. Paris, 1858.

² Olshausen, *Zeitschr. für Geburtsh. und Gynäkol.*, xxi., fasc. 2.

his own personal observation he could find in two hundred cases of eclampsia, eleven cases of insanity. Simpson had already called attention to the relation between albuminuria in pregnant women and its psychoses.

That psychic troubles may be observed in affections—whether acute or chronic—of the bowels, is beyond controversy. According to Binswanger, they are analogous to those observed in certain forms of intoxication, saturnism, morphinism, chronic alcoholism. These derangements, caused by uræmia, acute or chronic, are in every instance very uncommon ; they are intoxications brought on by the products of decomposition arising from the process of nutrition.

The psychoses which follow eclampsia arise in the first days after confinement, from the second to the fourth day, that is to say, before the date at which the puerperal psychoses assert themselves ; they usually ensue on the awakening which follows the eclamptic coma, and may come on one day after the eclamptic attack. Insanity, according to Olshausen, in this form is acute in character, not febrile, and presents the characteristics of hallucination. The progress of the attack and its cure are very rapid, hence it happens that the majority of cases have not been observed in the various asylums, and that they have not been given a place in the studies of psychiatry.

Résumé.—The writer whom we quote thus divides the puerperal psychoses : first, those which depend directly on febrile puerperal affection or psychoses of an infectious nature ; second, those which he designates under the name of *idiopathic*, arising from no febrile affection, and not caused by any organic lesion ; in this group are comprised the psychoses of pregnancy and of lactation, with a part of those which supervene on confinement, which may be attributed to debilitating causes—hæmorrhage of a profuse kind, &c. ; finally, those psychoses produced by intoxication, the after effect of eclampsia, and rarely in uræmia without eclampsia. According to Westphal, it would be chiefly after

puerperal sapraemia and ulcerative endocarditis that the acute psychoses would be observed.

Treatment.—It is easy to understand the therapeutic indications which may result from the considerations we have just laid bare. The removal of every cause of irritation, a tonic regimen, stimulants or sedatives, some gentle purgatives, sometimes opium with aloes, chloral hydrate injections—these are the principal means which should be employed in the greater number of cases.

The lesions found at the autopsy of women attacked by puerperal insanity are extremely variable. At the outset of the malady it would seem that there is usually a vascular turgescence of the brain more or less intense, and, in some exceptional cases, a hæmorrhagic exudation of a passive nature.

**SUMMARY OF GYNÆCOLOGY, INCLUDING
OBSTETRICS.**

GYNÆCOLOGICAL.

ON SNEGIREFF'S MODIFICATION OF DOYEN'S METHOD OF
HYSTERECTOMY FOR FIBROMYOMA BY ABDOMINAL
SECTION AND PER VAGINAM. By Dr. ZENKOVITCH.
Moscow Dissertation, Vrach, 1895, No. 30.

After careful preparation of the patient she is placed on the operating table. At first the operation was performed on the ordinary table, but later Snegireff used Delagénière's table, which allows the lower part of the body to be raised and the upper part to be lowered. The incision is made in the linea alba, corresponding in length to the size of the growth. Péan's forceps are used to stop bleeding points. The patient is then placed in the Trendelenburg position, by lowering the half of the table under the upper part of the body. The tumour and the uterus are brought out of the incision. The bowels are covered with sterilised pads and are pushed up and retained by an assistant. Then two incisions are made on each side of the uterus parallel to the insertions of the broad ligaments, front and back. The lower ends of these incisions in front are joined by a horizontal incision above the bladder boundary, and those behind are joined similarly by an incision two cm. above the floor of the pouch of Douglas. The upper ends of the incisions do not quite reach the points of origin of the Fallopian tubes. Then the peritoneal covering of the uterus is stripped off quickly in correspondence with the incisions. Through the slit [in the broad ligament] thus formed, a stout catgut ligature is passed by means of Deschamp's needle and tied

beneath the appendages, so as to include all the vascular branches on the front and sides of the uterus. Forceps with long blades are then applied to the uterine ends of the ovarian and round ligaments and of the Fallopian tube. Then the broad ligament is cut through and worked off the side of the uterus between the point of ligature and the clamp. This is repeated on the other side.

The tumour having been thus freed on both sides, the next step is to free it from the bladder. By drawing the uterus upwards and outwards one can make out the vesical artery almost to its branches. These are tied by catgut sutures passed with Deschamp's needle and cut through above the ligature. In this way the cervix becomes free in front and at the sides. Then the posterior peritoneum is separated down until the vaginal portion of the cervix can be felt free from it. Then the posterior wall is cut through with a knife, and the margin of the vaginal mucous membrane is caught up with Kocher's forceps and the cervix is freed with the knife laterally and in front. The tumour and whole uterus thus are freed. The vaginal walls and the bleeding vessels are seized in Kocher's forceps and tied with catgut. The uterine appendages are cut off below the points of application of the clamps, the abdominal cavity is cleaned and a pair of long-bladed curved forceps are passed through the vagina and the long sutures upon the broad ligaments are caught in them; thus the stump of the broad ligaments are drawn into the vagina. The ligatures are fixed with Péan's forceps and the anterior and posterior peritoneal flaps are sewn together from the peritoneal aspect with continuous catgut suture, by which the vagina and the depressed broad ligament stump are completely excluded from the peritoneal cavity. A Mikulicz drain is placed in the floor of the pelvis. The patient is put into the horizontal position and the abdominal incision closed with deep and superficial silk sutures. The iodoform gauze is carried out through the vagina, and the abdominal wound is covered with a binder.

On the third day after the operation the patient is given some kind of saline laxative, or castor oil and enemata are commenced.

On the third evening or the fourth morning the iodoform gauze is taken out of the vagina, and douching with sublimate of lysol is done twice a day. In the course of three or four days the iodoform gauze is removed from the peritoneal cavity, and if a sanious discharge is present, which is frequently the case, a rubber drain of medium size is put in until the stitches are removed, *i.e.*, the ninth day. After removal of the stitches and the drainage tube, the fistulous track of the latter soon closes up.

On the tenth day the patient may turn on her side, and sit up on the twelfth, rise and walk on the sixteenth day, in doing which an abdominal belt is absolutely necessary. At the end of three weeks the patients go home.

By this method of Professor Negireff, seventeen cases were operated upon from December 8, 1894, to March 17, 1895, of which one died on the third day, but the cause of death, owing to refusal of autopsy, remained unexplained (septic infection?). Twenty cases were operated upon by Doyen's own method, some with preliminary opening of the posterior vault, and others with various undescribed variations, as the above method had not been worked out. The author gives the following as advantages of the method :—

- (1) No sutures are left in the peritoneal cavity.
- (2) No wound surface is left above.
- (3) If bleeding takes place it will be external and not intra-peritoneal.

FRED EDGE.

THE METHOD OF OPERATIVE TREATMENT OF SUBMUCOUS MYOMATA OF PROFESSOR VEIT, OF BERLIN AND LEYDE. By Dr. H. SCHILLER, assistant to Prof. Veit, from the *Revue Illustrée de Polytechnique Médicale*, of June 30, 1896.

A new method of operation for the removal of uterine myomata has been advocated by Professor Veit, which,

although inspired by Doyen's method, yet differs from it. It consists in an incision of the anterior wall of the cervix and of the inferior portion of the body of the uterus, followed by the enucleation of the myomata situated under or near the mucous membrane.

The set of instruments required is very simple. Professor Veit employs two Simon's speculums, two pairs of Museux' forceps, one knife, one pair of scissors, one Hegar's needle-holder, one Deschamp's pin, and catgut ligatures.

The process is as follows: Incision of the internal vaginal wall as for vaginal hysterectomy. The bladder is then separated from the anterior surface of the uterus by means of the right thumb-nail as far as possible. Incision of the cervix and of the inferior portion of the body of the uterus. Opening the portion of the uterine mucous membrane situated upon the myoma by means of a finger-nail. Enucleation of the myoma. Suture of the incisions made upon the uterus and vagina with catgut ligatures.

Professor Veit first employed this method for removing *per vaginam* myomata, which formerly had to be enucleated by dilatation of the cervix. This he considered a real progress, to be able to do at a single sitting what previously required several (dilatation of the cervix, enucleation, and eventually hysterectomy), sometimes even with putrefaction of the myomata. Now it is possible to remove these tumours in one sitting.

This method is equally adapted in many cases as a substitute for hysterectomy for myoma. Myomata are benign tumours, and it is only necessary to remove those which give trouble, with the exception of those of enormous size, and of those which have undergone malignant degeneration. The principal symptom is metrorrhagia. In cases of hæmorrhage from myomata, the usual treatment by curetting, perchloride of iron injection often deceives our expectation.

In all cases of threatening uterine hæmorrhage, the removal of submucous myomata is an efficient treatment.

In fact, it is a rule that when the surgeon intervenes in cases of hæmorrhages of that kind, accompanied by threatening symptoms, he will find one or more myomata projecting into the uterine cavity.

The technique of enucleation is not always simple, but it is important to observe that the majority of myomata are enucleable, and it may be affirmed that when a portion of a myoma is enucleable the whole of it assuredly is.

Two objections may be made to this new method : (1) the diagnosis is difficult ; (2) relapses are possible.

With regard to the first objection, the myoma can be felt through the intact uterine walls by abdomino-vaginal exploration, and the projection of a polypus recognised directly by catheterization. No doubt the practitioner must be well experienced, but it is one of the first principles of modern gynæcology to be able to discover very exactly, by our methods of examination, the slightest anomalies to be found in the uterus.

As to the second objection, it is not denied that relapses are possible, but the importance of this objection is diminished by the fact that the abdomen is not opened, but only the cervix uteri ; the cervical incision may be made a second time if necessary.

Another danger consists in coming across some uterine lesion after having incised the mucous membrane and enucleated the myoma ; vaginal hysterectomy may then be resorted to.

If it is found impossible to remove the myoma by incising the anterior wall, the posterior wall of the cervix and body of the uterus may be divided, even sometimes as far as to implicate Douglas' *cul-de-sac*, or the size of the tumour may be reduced.

Besides hæmorrhage, impaction of myomata constitutes another important symptom. Impaction may occur in all forms of myomata, but it is more frequently met with in tumours situated in the pelvis. Even in such cases Professor Veit does not perform hysterectomy, but simply removes the

tumours. The process which he adopts in those cases of impacted myomata situated in the pelvis is as follows: Incision of the anterior vaginal wall as for hysterectomy separation, with the fingers, of the bladder from the anterior surface of the uterus, an incision on the side where the myoma is situated. If the uterine artery can be secured, it is tied by means of two ligatures. From that time no trouble is experienced until the myoma is reached, when it can be enucleated without removing the uterus. When, in addition to sub-mucous tumours, pelvic tumours are found also, it is more easy and more radical to remove the uterus.

When is vaginal hysterectomy preferable to laparotomy for removing the uterus? Vaginal hysterectomy is to be preferred when the tumour is movable and situated towards the pelvis, or at least when the greatest part of the tumour is situated in the inferior region of the abdomen. In contrary cases, laparotomy should be preferred.

These two operations differ in this sense—that in vaginal hysterectomy the patient's life is endangered in the course of the operation in consequence of the difficulty of properly securing the blood vessels. In laparotomy the greatest danger is not during the operation, but afterwards from septic infection. Therefore, only suitable cases should be selected for the operation.

The ligature which presents most difficulty is the utero-ovarian, not the uterine. The fundus uteri may be raised so as to draw the broad ligaments to the vulva and secure the utero-ovarian vessels, the complication of a pyo-salpinx being very rare in myomata, the broad ligament is not shortened.

Whatever method is selected, the facility of applying this ligature depends upon the mobility of the myoma. From these considerations Professor Veit selects one or other of these methods and proceeds with the intention of removing the uterus completely in cases in which the excision of one or more myomata proves insufficient to relieve the symptoms which necessitated the operation.

The following conditions will justify the total extirpation of the uterus :—

(1) When in the course of the operation important lesions of the uterus which had not been observed before are discovered.

(2) When tumours in the broad ligaments are found as well as submucous myomata.

(3) When the myomata are undergoing malignant degeneration.

The technique of total vaginal hysterectomy has been perfected by Péan, Doyen, Landau, Leopold, Dührssen, Maikenrodt. Professor Veit only uses the forceps in cases of expediency, but as a rule prefers the ligature. Doyen has shown that it is possible to draw the uterus to the vulva without any ligature, and then to secure the broad ligaments. Whether the forceps or ligature are used, the difference of the duration of the operation is insignificant, as quickness of performance is not the principal point of the operator. Otherwise the technique is simple. When the operation is finished the pedicle formed by the broad ligament is fixed to the vagina by a ligature.

From the foregoing remarks the following conclusions are easily arrived at :—

(1) In the case of a small sub-mucous myoma the removal should be effected by an incision in the anterior wall of the cervix uteri, followed by enucleation.

(2) When there are two sub-mucous myomata or only one of larger size the incision should be made in the posterior wall as well as in the anterior, the volume of tumour should be reduced and the enucleation made.

(3) A smaller interstitial myoma can also be removed by enucleation without hysterectomy. It is for the second and third class of cases that the method of Professor Veit constitutes a real progress.

(4) If a combination of interstitial and sub-mucous myomata is found it is preferable in most cases to perform hysterectomy.

(5) Voluminous interstitial myomata should be treated by the vaginal method or laparotomy, according to the results of a judicious examination.

Such are the principal points, in a general way, of the technique of operation of Professor Veit, which may be varied according to particular considerations of each case.

P. Z. HEBERT.

METRRORRHAGIA DUE TO ANGIOMA OF THE UTERUS.

In the *Archives de Gynécologie et de Tocologie*, for June, 1896, Drs. R. Pichevin and Auguste Petit describe a case of persistent metrorrhagia which was eventually treated by hysterectomy. From examination of the uterus they believe that it was the seat of a special disease characterised by notable increase in the number of the uterine vessels and abnormal development of the peri-vascular connective tissue.

The history of the case was as follows:—

T., aged 41, was married at the age of 19, and for some time after this period menstruated regularly except when pregnant. She had five normal pregnancies and labours.

In 1883 the patient suffered from typhoid fever, and after convalescence was troubled with severe menorrhagia. In spite of this, however, another pregnancy occurred in 1884, followed by a normal delivery. After this, menorrhagia returned, the period lasting two weeks at each menstruation.

In 1885 another pregnancy occurred, and this was followed by marked diminution of the periodic loss, which lasted for eight days only. A profuse leucorrhœa, however (which had been gradually increasing for many years), persisted and was abundant.

In 1887 another pregnancy occurred, and this was followed by regular periods until 1889.

In 1890 metrorrhagia became marked and serious. At one time the hæmorrhage lasted for three months. In 1891, from April 13 to October 28, the hæmorrhage was continuous for six and a half months.

In November, 1891, curetting of the uterus was per-

formed at the Maternité, and this was followed by improvement for one year. Further metrorrhagia then took place for two months. This was temporary only, and the patient was fairly well and "regular" until July, 1894. At this date "flooding" took place, and again in August a profuse metrorrhagia came on which did not cease until December 8.

About this date the patient came under the notice of the writers of this paper. On examination the uterus was found large and thick; the cavity $8\frac{1}{2}$ cm. long. It was mobile and in normal situation; appendages normal. No sign of pregnancy. Vagina capacious. The diagnosis was made of "uterus fibromateux" (uterine myoma).

On December 18, the uterus was curetted. This caused an abundant access of hæmorrhage, and the operation was finished by removal of the uterus. The patient recovered.

On examination of the specimen removed the mucous membrane was found without trace of fungosity or thickness or pregnancy. The uterine walls were three times the ordinary size, of normal consistence, and without any sign of malignancy. There was no myoma.

Microscopically, the vessels of the uterus were abnormally increased in number, in some parts replacing the uterine stroma. The walls of the vessels were considerably thickened, and the peri-vascular connective tissue was abnormally developed. The lymphatic vessels were also enlarged in size and number. The muscular tissue of the uterus was to some extent replaced by connective tissue and vessels.

The authors differentiate this condition from that which is found in chronic metritis, and consider the pathological changes to be of importance; that they point to a special malady, and that the removal of the uterus for this affection is justifiable when the patient is over 40 years of age. There are undoubtedly certain rare cases of obstinate metrorrhagia rebellious to the usual methods of treatment, for which no adequate cause can be discovered.

When hysterectomy is performed for such a case as a *dernier ressort*, the question of any true vascular change in

the uterus (other than that which is associated with chronic metritis) may well engage the attention and investigation of the observer.

J. W. TAYLOR.

VAGINAL FIXATION OF UTERUS. By PROFESSOR MÜLLER of Bern. Vratsch, 1896.

Vaginal fixation of the uterus for backward displacements of uterus, has, in Professor Müller's (Bern) opinion (formed from forty-three operations), a decided advantage, both over ventral fixation and over the method by shortening the round ligaments (Alexander). The disadvantage of ventral fixation consists not so much in the danger of infection from abdominal section, but in the formation of a fistula and its consequences — ventral hernia. Alexander's operation leaves external scars; two wounds are necessary; it is not always an easy matter to find the round ligament in the inguinal canal, and, finally, it may be necessary to expose the place owing to which, and even without this, hernia easily arises; in addition, the union often stretches. Seeing these disadvantages of the two other methods, the author turned to the method of vaginal fixation as begun by Schücking, and worked out by Mackenrodt and Dührssen. The method, as used by Müller, is as follows:—

After preliminary curetting of the uterus, and application of 50 per cent. solution of carbolic acid, which should not be omitted on account of the frequent co-existence of endometritis with backward displacements of the uterus, and likewise because of the possibility of a suture entering the uterine cavity, and consequent danger of infection, the uterus is pushed into the position of anteflexion by means of Orthmann's instrument, and drawn strongly downwards. The anterior vaginal wall is then cut from the point of its insertion into the cervix up to the meatus urethræ, but not reaching the latter by two cm. If cystocele be present, a vertical oval of mucous membrane is marked out and at once removed.

The author preferably carries this denudation close to

the urethra, so as to remove the strong protrusion of the urethra so often left after labours, and which is, by its feeling of bearing down, the beginning of prolapse of the anterior vaginal wall.

After this the bladder is separated from the vagina through the incision, and with the haft of a knife from the cervix; the fingers may also aid in this. For this purpose also a solid catheter is passed into the bladder. The bladder is drawn away from its connections, and held up by a retractor, or fixed in its displaced position by a few temporary catgut sutures. It is only by this thorough careful separation of the bladder in the first stage that injury of it by the sutures or pressure upon it by the uterus can be avoided, and in case of pregnancy this allows of uterine expansion without dragging the bladder up. If the uterus is not large and it is movable, it protrudes from the incision after the bladder has been drawn up. It is then easy to reach the peritoneum on the anterior uterine wall, and its point of reflection upon the bladder. Then half a dozen strong catgut sutures are passed transversely in the anterior uterine wall, beginning at the wound above. The points of entrance and exit of the stitches are 2 cm. apart. Then these stitches are carried through the edges of the wound 1 cm. from the margins. The sutures are not tied yet, but the vaginal wound is closed with a continuous catgut suture from the urethra to the cervix. Orthmann's instrument is removed and then the sutures are tied in the order of their insertion. The cervix is pushed upward and back as far as possible, and pressure applied from above on the fundus puts the uterus into an advanced position of ante-version, in which it is fixed by firm tamponade of the vagina with iodoform gauze. The bladder is freed. The patient is kept in for eight or ten days. The catheter is used if necessary; the gauze is removed, and astringent vaginal douches are used. Secondary treatment generally extends over eight or ten days. Usually the operation is easily performed without any troubles. The advantages are: (1) the operation is not

performed on the surface of the body, but in the vault of the vagina ; (2) it is less terrifying and dangerous than other methods ; (3) the peritoneal cavity is not opened ; (4) no after treatment is required, and convalescence is quick. It is impossible, after such a short interval, to form an opinion of the final results of these operations, but so far the author is completely satisfied with the improvement.

He only operated in cases of mobile uterus, desiring to substitute operation for pessaries. The operation may, perhaps, also succeed in cases of fixed retroflexion, where the uterus has been loosened by massage or Schultze's method ; Müller cannot say for certain, since he did not use the method in such cases. Similarly he refrained from vaginal fixation in cases of severe disease of the appendages, for which Dührssen proposed his operation, and in which cases the chief question is removal of the appendages and vaginal fixation is secondary. Müller often uses vaginal fixation in operating on prolapse of the uterus, curing the retroflexion, which is the precursor of prolapse, and preventing thus the recurrence of the prolapse.

FRED EDGE.

CÆLIOTOMY FOR POST-PARTUM ACCIDENTS DUE TO VENTROFIXATION. GUERARD. *Centralb. f. Gyn.*, p. 531, 1896.

The case was that of a very muscular III-para of 32 years, who had been in labour 20 hours, with membranes broken 17 hours when Guerard saw her. Tem. 38·9°C., pulse 102. Ventrofixation by a distinguished operator, about four years ago, had relieved her from much of the abdominal pain she had suffered for many years. She had had normal labours nine and eleven years ago ; had married a second time two years back. Coeliotomy scar in mid-abdomen, the lower part, broad and dark in colour, was drawn 5-6 cm. inwards during the pains.

Pelvic measurements normal ; child's back to the left, small parts not palpable ; foetal heart, quick and weak. Os fully dilated, head presenting in cavity of the pelvis. After

further delay of two hours, as the temperature was 39°C. and the heart sounds were getting weaker, a somewhat asphyxiated child, afterwards revived, was delivered by forceps. A moderate but continuous discharge of dark blood followed, and the uterus, very large and soft, was apparently full of blood, and pressure brought away a great quantity of clots with the placenta. Friction and irrigation with 0·6 per cent. salt solution at 50° C. was of no use; massage was impeded by the firm adhesion and the rigidity of the posterior vaginal wall; the hot injection had little effect, the vaginal vault was too high up for the uterine vessels to be compressed, the abdominal walls too muscular for the aorta. The pulse was thready, and Guerard decided not to trust to tampons, for reasons given below, but to deal with the adhesion at once. A footstool elevated the pelvis, the abdomen was washed with lysol and sublimate, the hands disinfected, and the asepsis of instruments and dressings relied on. The peritoneum was opened by an incision along the right edge of the scar; the omentum adhered to the uterus, especially at the upper end of the scar, but was separated without requiring a ligature. On cutting round the left edge of the scar with scissors, under protection of the fingers, there was great hæmorrhage from a subperitoneal hæmatoma formed to the left of the fundus, and therefore as soon as the wound was large enough, Guerard's colleague introduced his hand and compressed the vessels near the cervix, as in Cæsarean section. The uterus was drawn out on to sterile gauze, the cicatricial tissue excised under a continued stream of 0·6 per cent. salt solution at 50°, and as the peritoneum removed was pretty broad, and the uterus had been irregularly torn on the left side (where the hæmatoma was formed by the force of the pains), a wedge of uterine tissue was also cut out, but the cavity was not opened. The catgut at hand not being perfectly reliable, ten or twelve silk sutures were inserted, and the uterus was returned and kept in forced anteflexion till the abdominal wound had been also closed by silk sutures, and a binder applied. A tampon, which had been

placed in the vagina, had been removed so as to apply massage, or bimanual pressure, to the uterus in its improved position, but this was not necessary; the patient hardly lost a drop of blood after the uterus was outside the abdomen. The stitching took up far the greater portion of the fifteen minutes the operation occupied. There were some remnants of silk sutures in the part removed. A clyster of two litres of warm water and several drachms of ether hypodermically were given at once. There was some excitement for an hour, but in two hours' time the patient was apparently in a deep sleep, but the pulse was weak, and sometimes imperceptible at the wrist. Next day, very well; marked peristalsis that evening, flatus the following night. Recovery uninterrupted; up in three weeks; weak and pale, but cheerful and in good spirits. At eight weeks she was free from all her former pains; the cicatrix was solid and almost linear; the uterus well involuted and ante-flected.

The atony was no doubt due to the ventrofixation; when stimulated the uterus contracted well up to the point of fixation, and then relaxed, and the difficulty in dealing with the hæmorrhage was due also to the attachment. Tampons might perhaps have stimulated the uterus to contract, or stopped the bleeding by compression; but the contraction was seriously impeded by the fixation, and the patient had already lost so much blood that even the amount necessarily taken up by the tampon might have been fatal; as it was in a case of which the efficiently plugged uterus was, at the time, shown to the Berlin Obstetrical Society. Even the necessity for the forceps was due to the ventrofixation. The attachment was so firm that under further delay the laceration of the uterus would have ended in complete rupture.

J. J. M.

NOTES ON OVARIOTOMY. By Sir WILLIAM STOKES, Dublin. *Dublin Journal of Medical Science*, July, 1896.

Those notes are based on Sir William Stokes' last twelve cases, and among other reasons are instanced to show that ovariectomy can be successfully performed in a general hospital of "considerable antiquity of structure," with careful attention to modern surgical methods and cleanliness by a general surgeon. Of these twelve cases, ten were brought to a successful issue.

The preparatory toilet is strongly emphasised, and is begun at least seven days before the operation. It consists mainly in rest in bed; a daily bath in water impregnated with an antiseptic, such as eucalyptus. On the morning of the operation, a thorough surgical cleansing of the abdomen with soap, creolin, and ether is made, and a piece of lint folded twice and soaked in a solution of carbolic acid (1 in 40) is placed over field of operation.


A hypodermic injection of sulphate of strychnine ($\frac{1}{16}$ th gr.) is (as suggested by Ashton), given three times daily, with the idea of preventing or diminishing post-operative shock.

A hypodermic injection of morphia ($\frac{1}{8}$ th gr.) is also given immediately preceding operation, unless specially contra-indicated.

The diet is of a sloppy character.

With regard to the operation itself, Sir William Stokes advocates a "tolerably free" rather than a very limited abdominal incision, so as to avoid bruising or contusion of the wound by dragging tumours, &c., through it.

All firm adhesions he carefully ligatures with chromic or carbolised catgut, "previously rendered beyond all suspicion aseptic"—the process of its being made so is not given—and then divided with scissors as close as possible to the tumour. He prefers strong silk as a pedicle ligature, and a needle made on the principle of a Reverdin's, but blunt-pointed, so as to diminish the chances of the formation of hæmatomata.



The after treatment is carried out mainly on Ashton's lines. For the first twenty-four hours, if possible, nothing in the way of food is given by the mouth; after this, peptonised milk in small quantities, or koumiss, and later on chicken broth or carefully-made clear beef-tea; and for a drink, milk in iced soda or potash water will answer best in the majority of cases. For persistent gastric irritation a small quantity of dry champagne well iced, or iced soda-water with a teaspoonful of brandy. All drugs are avoided. In such cases rectal feeding should be resorted to until the tendency to vomiting ceases.

F. F. S.

ON THE TREATMENT OF INOPERABLE CASES OF CARCINOMA OF THE MAMMA; SUGGESTION FOR A NEW METHOD OF TREATMENT, WITH ILLUSTRATIVE CASES. By GENGÉ THOMAS BEATSON, M.D.Glasgow.¹

Dr. Beatson's new method of treatment for inoperable cases of carcinoma uteri consists of removal of the uterine appendages. He read the notes of two cases in which he had operated and showed the patients at the May meeting of the Edinburgh Medical Chirurgical Society.

The first case was 33 years old, mother of two children, aged 3 years and 15 months respectively. She nursed both her children for from ten to twelve months, chiefly on the left breast, the first child entirely so, as the right breast suppurated for two or three weeks. While nursing her first baby she observed a small, hard lump at the outside of her left breast, and as it was painless and did not increase in size she took no further notice of it. It was only when her second baby was born twenty months later that she became aware it was increasing. She nursed the child on both breasts notwithstanding, and it was not for ten months, by which time the tumour had grown a good deal, that she weaned the child and sought advice at the Glasgow Royal Infirmary.

¹ Read before the Edin. Med. Chir. Society, May, 1896, and reported in *Lancet*, July 11 and 18, 1896.

She was operated on on January 25, 1895, the whole of the right breast, skin, axillary glands and part of pectoral muscle was removed. She left the hospital in March, the wound having almost healed. She returned in April with general involvement of the whole site, with adhesions to chest wall and with some ulcerated portions. It was thought impossible to do any further operation and she was sent on to Dr. Beatson. The pathologist reported growth to be "typically cancerous."

She was treated for one month with thyroid extract, but there was no improvement. On June 15, 1895, both ovaries were removed, the right one was healthy the left "somewhat cystic." The thyroid treatment was continued on July 19, the mass was less vascular, small and flatter.

On October 12 the report was as follows :—"On examination of the left breast the condition of the tissues is favourable. The most remarkable feature of the case is the yellow fatty look that the former thick bar of cancerous tissue above the scar of the incision for removal of the breast presents. It is to my mind the most striking feature of the case. The cancerous tissue has been reduced to a very thin layer and is in no way raised above the surrounding skin. In fact, the whole surface is smooth and level, and to the naked eye it seems as if the skin at this part had a yellow look. So distinct is this that one could easily trace out the outline of this yellow-coloured tissue. At places the surrounding skin seems pushing its way into the yellow mass and the processes of bluish cicatricial tissue are to be noted. The yellowish nodules at the axillary end of the incision are still apparent from their colour, but they seem thinning out. The whole of the tissues on the chest wall are more movable and the surrounding skin has a clear and healthy look. The scar of the former ulcer above the mammary excision cicatrix is sound and no new nodules are at present observable. The patient expresses herself as feeling very well and looks so. She is taking four 5 gr. tabloids of thyroid extract daily." Eight months after the

operation all vestiges of her previous cancerous disease had, it is asserted, disappeared, and she was shown with a sound cicatrix and healthy thoracic tissues, and she was apparently in excellent health.

The second case was not so marked. The patient was 40 years of age, with no family. She had a mass occupying the whole of the right breast, the skin was adherent, the glands in the axilla and the clavicle were infiltrated. Microscopic examination confirmed the opinion as to malignancy. The appendages were removed on October 3, 1895. The thyroid treatment was also adopted.

On December 3 the report was as follows: "There is now a striking difference in the size of the tumour of the right mamma as compared with its former state and over the inner and upper parts of the tumour the skin is becoming freer and can now be pinched up, though it is still distinctly thickened and infiltrated. Formerly it was quite impossible to grasp it at all, so firmly was it adherent to the tumour." She did not improve when out of hospital and was readmitted on March 2. Of her Dr. Beatson says: "She was kept in bed and three thyroid tabloids were administered daily. Under these measures she improved gradually and seemed to be free from pain, sleeping well without any opiates. On April 7 there was noted the increased size of the nipple of the right breast. It was of a pale pinkish colour, somewhat glossy, was like a raspberry in shape, and about four times the size of the left nipple. It now stood out prominently from the centre of the tumour, while formerly it was sunken and retracted. I have exhibited this patient, not putting her forward as a case that is cured, but simply as illustrative of the changes that were noted in the first case, but which have now entirely disappeared in her. Thus, in the enlarged supra-clavicular glands, if examined closely, areas of yellowish-white coloration will be noted, which indicate, I consider, the presence of fatty degeneration—a condition present in the cancerous masses in the first case before they eventually disappeared. The same can

be seen in several of the nodules in the vicinity of the breast, and recently one of them, just above and to the right of the nipple, broke, and has left a yellowish scab with a subjacent ulcer. A comparison of the two casts of the right mamma, taken at intervals of five months, shows the difference in the size of the mammary tumour at the two periods. Altogether I am inclined to think that the disease is in a more quiescent stage and gives some indications of a possible cure."

The third case was 49 years of age, and as Dr. Beatson did not feel inclined to operate on her she was treated only with the thyroid extract and did not improve. She was shown in order to prove that the change in the other two cases was due to the removal of the appendages (primarily) and not to the thyroid treatment.

With regard to the pathology of cancer, Dr. Beatson does *not* believe in the local origin of the disease, and agrees with those who regard the structures known as "cancer-bodies" as "simply epithelial cells undergoing vacuolation in the course of what is evidently a mucoid degeneration."

As the result of observation and experiments on cows and rabbits, Dr. Beatson comes to the conclusion—(1) that the secretion of milk has no special nerve supply ; (2) that the change that takes place in the mammary gland in the process of lactation is almost identical, up to a certain point, with what takes place in a cancerous mamma ; (3) that the custom adopted in some countries of removing the ovaries from a cow after calving *does* keep up the supply of milk indefinitely ; (4) that there is marked local proliferation of epithelium during lactation, the very thing characteristic of carcinoma of the breast, and, indeed, of the cancerous process everywhere, but differing from it in that it was held in control by another organ, and could either be arrested by that organ altogether or continued to a further stage, where the cells became fatty and passed out of the system not only in an innocuous but nourishing fluid—milk.

He asserts that all pathological changes are merely

modified physiological ones, that there is no essential difference between the two, and that a knowledge of the forces controlling the one may sometimes give us a clue to the other.

He therefore submits the theory that by removing the ovaries the cancer-cells may undergo fatty degeneration as in lactation, and it was on this theory that he operated in the above-mentioned cases.

F. F. S.

IMPLANTATION OF THE URETER INTO THE BLADDER, PER ABDOMINAL SECTION, FOR THE CURE OF URETERO-VAGINAL FISTULA. By H. J. BOLDT, M.D. *The American Journal of Obstetrics*, June, 1896.

Taking into account the frequency with which the ureters receive injury in the present day, owing to the large number of vaginal hysterectomies, even in the hands of the best operators, Dr. H. J. Boldt, of New York, gives interesting details of three cases in which he had successfully implanted the ureter into the bladder for the cure of the uretero-vaginal fistula thus occurring. He strongly urges that the operation should be done as soon as possible after the diagnosis has been established, on account of the great liability of the respective kidney to become infected. His first case was one of vaginal hysterectomy, "for suppurative salpingitis, chronic pelvic-peritonitis, and chronic metritis," from immobility of the uterus and intestinal adhesions; the operation was very difficult. A few days subsequently it became evident that a uretero-vaginal fistula existed. Local treatment was at once adopted to allay the inflammatory infiltration surrounding the fistula at the roof of the vagina and pelvic floor, so that a plastic operation could be performed, which latter failed in its result. The patient complained bitterly of the inconvenience caused by the existence of the fistula. She was unusually corpulent. A gum elastic catheter was passed into the ureter from the vaginal opening, to act as a guide for the abdominal work. The abdomen was opened and the lower segment of the ureter, which though fixed, owing to the

existence of perimetritis, was, thanks to the presence of the catheter, resected without injury for the distance of about 7 centimetres, leaving the peritoneal covering remaining on it. At the vaginal junction the ureter was severed, but the catheter allowed to remain in it. The bladder was then filled about two thirds full of sterile water, to permit of a choice of a place for implantation, which was desired to be as near as possible to the normal position. The bladder was opened by an incision nearly a centimetre in length, it was now emptied by the catheter. After the bladder had been opened a long pair of uterine dressing forceps was passed through the artificial opening into the bladder *per urethram*, and the urethral catheter drawn through the viscus and out of the urethral opening, so that it protruded about 10 centimetres; the ureter was invaginated through the opening in the bladder to 1 centimetre. Three fine silk sutures were placed through the entire thickness of the bladder, excepting the mucosa, and quite superficially through the ureter. The abdomen was closed. A permanent catheter was finally put into the bladder alongside of the urethral catheter to keep the bladder empty, and so prevent any strain on the newly made opening. The recovery was uneventful. He quotes cases by Krause, Kiley, Witzel, Penrose, and others, operated upon with a like view.

W. TRAVERS.

UTERINE DERMOID; HYSTERECTOMY. By GEORGE ERETY SHOEMAKER, M.D., *American Journal of Obstetrics*, June, 1896.

Dr. Shoemaker reports on an interesting and unique case of uterine dermoid. The patient, fourteen years after the menopause, began a year previously to have a bloody vaginal loss—one free bleeding lasted several days. There was also constant highly offensive discharge like muddy water, or, “the washings of beef.” Incessant burning pain through abdomen and back. Had been losing flesh for a year. Frequent micturition. The vagina was found sessile, smooth, very narrow below; its walls swollen and oedematous

about the cervix. Uterus soft, symmetrically enlarged, length four inches; fundus adherent, retroflexed; movement limited, but no infiltration detected around. Irrigation lessened, but did not stop, the discharge. The case was considered to be malignant and abdominal hysterectomy, by the ligation method, performed. On curretting (first) soft, cheesy, sarcomatous-looking material was brought away from, apparently, a large thin-walled cavity, and further irrigation and manipulation got rid of much cream-cheese-like stuff. The recovery was aseptic and complete. On opening up the uterus its cavity had formed a sac holding about two ounces, with walls a quarter of an inch in thickness—this cavity still contained several free rounded cheesy masses, which when crushed were most offensive—under the microscope these were found to consist of granular fatty detritus and long hair-like fat crystals. No true hair or epithelium was found. There was no disease of the tubes, the ovaries were small, the right somewhat calcified.

W. TRAVERS.

OBSTETRICAL.

ON THE MANAGEMENT OF NORMAL LABOUR BY EXTERNAL EXAMINATIONS ONLY. By LEOPOLD & ORB. *Archiv. f. Gyn.*, lxix. Hft. 2.

This comprises new material, supplementing the Leopold Spoelin work. Against the objections raised by Sænger, Odenthal & Strassmann, that external examination is often at fault in cases with fatty or oedematous walls, or of extreme sensitiveness, or with copious liquor amnii, and that the condition of the pelvis and soft parts remains unknown, and prolapse of the cord undiscovered, arguments are advanced based on the following statistics:—In 1,693 deliveries 1,334 were conducted without direct interference; internal examination was not employed in 57·5 per cent., and save for the purpose of instruction might have been omitted in 90·2 per cent. In three-fourths of the cases not

so examined the descent of the head and the progress of labour were exactly made out. In a second series of 110 cases no obstetric aid was given in 87·5 per cent., no vaginal examination made in 90·67 per cent. In the first series the diagnostic errors amounted to 1·7 per cent., but in no case were they detrimental to mother or child.

J. J. M.

DECIDUOMA MALIGNUM. By H. R. SPENCER, M.D., B.S.
Quarterly Medical Journal, July, 1896.

This paper is accompanied by a table of 40 cases, which includes Dr. Spencer's own case (recently shown). He defines deciduoma malignum—or, as it is variously called, sarcoma deciduo-cellulare, sarcoma giganto-cellulare, carcinoma syncytiale, sarcoma of the chorionic villi, carcinoma of the chorionic villi, serotinal tumour, &c.—as a malignant disease of the body of the uterus (occurring presumably at the placental site), arising in association with, or more commonly subsequently to, pregnancy, and rapidly terminating fatally, with secondary growths in various organs of the body, more especially in the lungs and vagina.

It is characterised microscopically by large cells of various shapes, of which some occur singly or in groups, and others in fused masses with large deeply staining nuclei, resembling giant cells—the so-called “syncytium.” Dr. Spencer thinks it probable that the syncytium of the deciduoma malignum develops from the syncytium of the chorionic villus, “though this is denied by some authorities,” who look upon the disease as a form of sarcoma of the uterus. Dr. Spencer points out on this point that no single case of sarcoma of the uterus exhibiting the syncytium and occurring in a woman in whom pregnancy could be excluded, has as yet been produced. An analysis of the table of cases shows that the age of the patients varied between 22 and 55 years.

6 patients were between 20 and 25					
11	”	”	”	25	” 30
8	”	”	”	30	” 35

4	patients	were	between	35	and	40
6	"	"	"	40	"	45
3	"	"	"	45	"	50
1	"	"	"	50	"	60

"The patients had all been pregnant (at least once) before the disease developed; the history being doubtful in one case only; the disease appears to be almost entirely confined to multiparæ, and in some cases there had been a long interval between the last two pregnancies. *In 18 (45 per cent.) of the cases there is a history of hydatidiform mole.* Usually the symptoms arose within a few weeks of the labour or abortion; in one case a secondary growth was observed eight days, in another fifteen days after delivery, showing that the disease in these cases existed during pregnancy. In some instances no symptoms of the growth occurred for several months after delivery.

"The characteristic symptoms presented by the disease are hæmorrhages coming on within a few weeks after labour or abortion, the passing of masses of growth, extreme anæmia, foetid discharge, and septicæmia with or without rigors. In a few instances, but not usually, hæmoptysis has been observed, due to the secondary growths in the lungs; in others secondary nodules having somewhat the appearance of varicose veins have appeared in the vagina or labium. *In one case (Apfelstedt and Aschoff's) the secondary growth in the labium and paravaginal tissue consisted of a hydatidiform mole, with the usual stalks and cysts; in another (Müller's) the metastatic vaginal growths took the form of a row of cystic tumours.* In several cases delirium was observed; my patient died from thrombosis of the cerebral veins, probably septic in origin. In 16 cases the labour occurred at or about term, at least later than the sixth month of pregnancy. In 6 cases abortion occurred in the earlier months. The disease is rapidly fatal unless treated by hysterectomy, which has been performed in 17 cases, of which 15 were by the vaginal and 2 by the abdominal route. Of these 17 cases only 2 died

from the immediate effects of the operation (six and twenty-six days after); 3 others died about six months after the operation, and 12 remained well when reported at various intervals up to eighteen months after the operation. The two most interesting of the cases submitted to hysterectomy are those of Schauta, and of Lonnberg and Mannheimer, as in both these cases secondary growths were also removed from the vagina, and yet the first of these patients remained well after a lapse of a year and a half (see *Monatschrift für Geb. und Gynäk.*, 1896, p. 387), and the second patient after half a year."

Dr. Spencer sums up his reasons for thinking the disease is *not* an ordinary sarcoma as follows :—

(1) The constant association with pregnancy (there is, I believe, no proof of its preceding or occurring apart from pregnancy); (2) the association with hydatidiform mole in at least 45 per cent. of observed cases, but possibly in a much larger percentage, since early hydatidiform disease is not always obvious at the first glance; (3) the constant occurrence of the disease in the body of the uterus; (4) Apfelstedt and Aschoff's case already cited, and perhaps Müller's case; (5) the microscopic appearance of the growth, which has been mistaken for placenta by obstetricians of large experience; (6) the macroscopic appearances.

F. F. S.

DECIDUOMA MALIGNUM. By WALTER C. SWAYNE, M.D.
Bristol: *Bristol Med. Chir. Journal*, June, 1896.

In this article Dr. Swayne, also analytically reviews the recorded cases. He says: "The question of place among malignant growths seems difficult to settle. Among the epithelial malignant tumours would appear the most rational in the majority of cases, since the greatest activity is manifested by the epiblastic elements of the segmental layers of the ovum."

Though the pathologists may differ, he considers that clinically the following definite statements may be made: (1) That a form of malignant disease of the uterus hitherto

unrecognised has been differentiated; (2) the presence of syncytial masses of protoplasm is a striking feature of several of these tumours, as (3) is also the similarity between these masses and the chorionic epithelium. In both, protoplasmic masses not divided into definite cells, deeply-staining nuclei, and vacuoles of varying size, either empty or with transparent contents, occur. These facts have been observed by Meyer, Klebs, Gottschalk, Fränkel, Marchand, and Whitridge Williams, and are quoted by the latter in the article referred to. All these have concluded that they had to deal with growths derived from chorionic epithelium.

In the cases now on record he says the points which are most striking seem to be (1) the number of cases which occur in connection with hydatid mole; (2) the fairly constant succession of symptoms; *e.g.*, hemorrhages, at first, followed by fœtor of discharges and cachexia; (3) the undoubtedly malignant character of the new growth, its characteristics being rapid invasion of tissue, rapid recurrence, early necrosis, and early metastasis; (4) the entire futility of attempting to deal with this condition by palliative, or rather minor, operative measures: *e.g.*, in one case after repeated *tamponnement* death, apparently from septicæmia, and in several others symptoms of septic infection, occurred as the result of measures taken for relief; the cases subjected to early vaginal hysterectomy recovered and remained well for some months.

He considers that in any case where hæmorrhage occurs in connection with the puerperal state, or after the puerperal period, more especially in cases of hydatid mole, the necessity for the exploration of the uterus, after dilatation of the cervix, must be remembered. The symptoms indicating the necessity for this treatment are, the character of the hæmorrhage and the enlargement of the uterus. These appear to give an indication which is fairly clear; the gushing character of the hæmorrhage, its irregular occurrence, the increase in size of the uterus after its involution, or involution becoming stationary, being rather different to the condi-

tions of hæmorrhage and enlargement occurring in simple or benign cases.

He concludes with a summary of the debate on "Deciduoma Malignum," at the Obstetrical Society's meeting in April, 1896, when Dr. Morrison and Dr. Herbert Spencer described their cases to the effect : (1) that the plasmodial masses were not necessarily syncytial, but found in ordinary rapid-growing sarcoma; (2) that syncytial masses could not be identified with accuracy merely from microscopic appearances; (3) that quite possibly many of the cases were sarcoma or carcinomatous growth, stimulated by or developed soon after pregnancy, but not necessarily connected with the products of conception; (4) that it was yet too soon to add a new disease to the list.

F. F. S.

SOME PRACTICAL DEDUCTIONS FROM A SERIES OF CASES OF PREGNANCY COMPLICATED BY FIBROMYOMATA. By Dr. F. W. N. HAULTAIN (Edinburgh). *Practitioner*, July, 1896.

Dr. Haultain gives the history of eight very interesting cases of this class, illustrative of the varied difficulties attending this complication. The first deserves notice on account of the method of treatment adopted and the success attending it. The history reads as follows :—

—, aged 35, married nine years, no children, two early miscarriages during first year of married life, complained of severe and exhausting menorrhagia and metrorrhagia, for which she had been treated by ergot, hot douching, &c. Uterus enlarged, regular in outline. Sound passed four and a half inches. Was treated by me with constant electric current; twenty-four applications. After sixteenth application a polypus, size of hen's egg, protruded through cervix, and was removed. Since that time she has felt perfectly well, and has borne three children in six and a half years.

In the second case the patient died thirty hours after being delivered of a five months' foetus. The condition as found *post-mortem* was diagnosed, but the patient was in

too exhausted a state to be operated on. The *post-mortem* examination showed the tumour to be an œdematous fibroid of the anterior wall, and so bulging into the uterine cavity as to divide it into two compartments, the lower containing the foetus and the upper the placenta; the communicating passage admitting with difficulty a Martin's curette. It was found impossible to pass a finger into the upper compartment to remove the placenta, and the patient's condition would not allow of laparotomy. She died in thirty hours.

In the third case at the fifth month, a fibroid the size of a foetal head involving the cervix was felt *per vaginam*, with a foetal arm protruding and jammed between the tumour and the symphysis pubis. Cæsarean section was performed, but the patient died three days later.

The fourth case was that of a primiparæ pregnant five-and-a-half months, a solid tumour filled the true pelvis; which under an anæsthetic was pushed up and pregnancy was continued to the eighth month, when after a normal labour a living child was born. Electrical treatment was afterwards adopted, tumour ceased to grow, but patient had no more children.

In the fifth case a small tumour attached to the left cornu of uterus enlarged during pregnancy from the size of goose's egg to that of a "penny balloon." The confinement was natural. Ten weeks after the only evidence of the growth was a small nodule "the size of a walnut" in the left broad ligament.

In case six patient was confined at the eighth month of a living child. Placenta retained in hour-glass-contracted uterus. By deep anæsthesia it was possible to overcome the constriction and detach the placenta, which was found partially attached to a fibroid on the posterior uterine wall. As hæmorrhage was profuse, and continued in spite of injections of hot water, the uterine cavity was plugged and supra-pubic pressure maintained for several hours. The progress of the case was uneventful.

The seventh case was a primipara who had a normal confinement. On the twenty-ninth day Dr. Haultain was summoned to find her bleeding profusely. The os uteri was

dilated to the size of a florin and through it a mass could be felt. This on removal proved to be a fibrinous polypus, about the size of a hen's egg, the nucleus of which was formed by a fibroid nodule no bigger than a hazel nut. Patient did well. Has had two confinements since.

The eighth case aborted at fifth month—septic symptoms supervened ten days after. The uterus was explored and soft mass was removed. This mass was demonstrated to be a breaking-down and decomposing fibroid nodule.

In his comments on these cases, Dr. Haultain goes into full details and discusses this complication under the headings of: (1) its effect in causing sterility; (2) its close simulation of other morbid conditions, thereby causing difficulty in diagnosis; (3) the dangers of its association with pregnancy.

He sums up his conclusions as follows:—

(1) That fibro-myomata interfere greatly with fertility by preventing conception and by tending towards abortion.

(2) That when associated with pregnancy they frequently give rise to much difficulty in diagnosis through masking the usual signs and symptoms of utero-gestation, and by themselves being markedly reacted on by pregnancy.

(3) That their association must be looked upon as considerably increasing the risks of pregnancy by complicating labour in preventing ready expulsion of the ovum and pre-disposing to severe hæmorrhage, and by complicating the puerperium.

As to the management of pregnancy complicated by fibro-myomata he thinks that to be entirely expectant, as many cases run a natural, uneventful, and satisfactory course. When serious symptoms arise, each individual case calls for treatment on its own merits according to the position and size of the growth. The alternative methods of removal of the tumour, the induction of abortion and premature labour, or the removal of the entire uterus and tumour, must be selected according to existing circumstances, with an impartial and unbiassed mind.

F. F. S.

MEDICAL PREPARATIONS, APPLIANCES, ETC.

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MAW'S ANTISEPTIC ACCOUCHEMENT SET.

We have had an opportunity of practically testing the value of this "set," which Messrs. Maw, Son and Thompson have recently brought before the profession. It is contained in a stout card-board

box, and consists of antiseptic accouchement sheet, 42 in. by 36 in. ; antiseptic accouchement sheet, 30 in. by 27 in. ; antiseptic binder, 54 in. by 18 in. ; 1 doz. antiseptic napkins for infant ; 1 box of Fuller's earth ; 1 box of violet powder, with puff ; 1 bottle tabloids of perchloride of mercury ; 1 bottle of Maw's carbolised petroleum jelly ; 1 cake of Maw's carbolic soap ; 1 skein of accouchement thread ; 1 dozen safety pins ; 1½ dozen straight steel pins for fastening the binder ; 1 dozen antiseptic towels, large size, with waistband, 1 dozen antiseptic towels, medium size, with waistband ; 1 mackintosh sheet, double faced, 10 in. by 36 in. for the bed ; 1 mackintosh sheet, single faced, 60 in. by 36 in. for the floor ; 1 packet of antiseptic dressings for the cord.

We found it very convenient to have all these necessities at hand, and to know that we were not entirely dependent for them upon the memory of the monthly nurse. The more important advantages, however, of such a "set" are that the materials are carefully selected and prepared, and are rendered as antiseptic as possible. Of the numerous items our attention was especially attracted to the *accouchement sheet*, which is stuffed with very soft white absorbent and antiseptic wool, and is lined on its under surface with a layer of waterproof wadding, to prevent discharges running through on to the bed, and to the *antiseptic binder*, which is of excellent material, sufficiently stout to be firm, but at the same time soft and comfortable to the patient—a combination not always met with. We feel sure that such a convenient, satisfactory, and at the same time, inexpensive "set" of midwifery necessities must commend itself to the profession, and that no lying-in room will be deemed complete without it.

EDITORIAL.

The May number contained Dr. Leith Napier's valedictory address on resigning his post of Editor of this Journal, a position he has filled most ably and successfully for the past three years. It was only natural and fitting that the Council should desire, in the name of the Fellows, to officially express and put on record its strong sense, both of the very special ability that Dr. Leith Napier brought to bear on his work, and also the energy with which he utilised that ability.

That the Journal should flourish under such Editorship was not to be wondered at, and we trust it will be gratifying to Dr. Leith Napier to know that the Society fully recognises his influence on the present position of the Journal. A letter containing these sentiments has been engrossed on vellum, and is at this moment on its way to him across the seas.

* * * * *

A carefully-worked-out article by Dr. Leith Napier, which appears in this very number, shows that though he is no longer in office he fully maintains his interest in the welfare of this Journal. We shall look forward with much pleasure to publishing further communications from him in due course.

* * * * *

None, perhaps, feel his loss more than those of us who, as colleagues, have been closely associated with him in the work of the Society, and who have now to try and fill his place to the best of our ability. We feel, however, that in endeavouring to carry on the Journal on the same lines as heretofore we are paying the best compliment we can to the late Editor, and at the same time studying the best interests of the Fellows. We shall venture to hope that, backed by the cordial support and generous co-operation of all the Fellows, the British Gynæcological Journal will continue to flourish and maintain its position as a record, not simply of the doings of the British Gynæcological Society, but of the best gynæcological work throughout the world.

THE BRITISH

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(1) UTERUS REMOVED BY VAGINAL HYSTERECTOMY FOR MALIGNANT ADENOMA OF THE CERVICAL GLANDS.

The patient, aged 34, single, enjoyed good health up to six months ago. Since then she complained of frequent and painful micturition, leucorrhœa, dysmenorrhœa, menorrhagia. Upon examination under ether, the cervix was

directed downwards and backwards, and felt as if distended by an ovum; fundus anteflexed with small fibroid; the uterus was very movable and easily pulled down. External os normal; profuse hæmorrhage on passing sound, and large masses were washed away with Bozeman's catheter; cervix curetted, and scrapings sent for microscopic examination to Professor McWeeny.

Diagnosis.—Malignant adenoma of cervical glands. Uterus was removed by vaginal hysterectomy, using Doyen's clamp forceps. Recovery uninterrupted. Malignant adenoma of cervical glands is, according to C. Gebherd,¹ extremely rare, he can only find a record of six cases. Ruge and Veit² say that cases of adenoma in the pure form are rarely met with, and Bröse³ agrees with them also in the extreme rarity of this affection. The specimen macroscopically shows the upper portion of the cervical canal greatly distended and excavated. The lower portion is apparently normal. The microscopic sections show a columnar cell epithelioma.

(2) FIBRO-MYOMATA REMOVED BY INTRA-PERITONEAL
ENUCLEATION.

A patient, aged 35, married, no family, consulted me for dysmenorrhœa, menorrhagia ten days, metrorrhagia, and for a lump in the lower part of the abdomen which was very painful and prevented her wearing a corset. External palpation revealed a small hard tumour in the hypogastric region; it was tender on pressure. Bimanually, uterus enlarged to size of fourth month pregnant uterus, studded with myomata. No sub-mucous fibrous polypi. Patient urged operation, but prayed that her womb would be preserved in the hope that she might bear a child. Abdominal section. Uterus drawn out. Elastic band placed around

¹ *Zeitschr. f. Geburt. u. Gyn.*, Bd. xxxiii., Heft 3, 1895.

² *Idem*, Bd. vii., S. 170.

³ *Idem*, Bd. xxxiii., S. 134.

cervix to control hæmorrhage. Two sub-peritoneal fibroids were easily removed by wedged-shaped incisions, and the base sutured with interrupted silk sutures. The capsule of the two interstitial fibromata were cut into and the tumours enucleated out of their beds. No opening into the uterine cavity. The cavity left after enucleation was brought together by interrupted silk sutures. There was slight oozing after loosening the elastic ligature; this was controlled by applying around the fundus a sterilised gauze sponge, which was wrung out of normal saline solution. Temp. 105° F. Recovery uninterrupted.

The PRESIDENT asked where the portion for examination removed by curetting, in the first case, was taken from; was it high up in the cervical canal?

Mr. JESSETT, referring to the first specimen, said he believed that epithelioma at the junction of the body and cervix was very rare, but probably many cases of carcinoma began high up in the cervix and worked their way downwards and outwards. The case showed the great importance of examination under ether; otherwise the disease would probably have extended far before being discovered. He had often been impressed lately with the difficulty of a proper examination without an anæsthetic. He noted that Prof. Smith used the clamps. He had lately seen Doyen, of Paris, who told him that in that city the clamps were always used, and that by that method they could take out a uterus in five minutes. With the ligature at least twenty minutes was required.

Dr. HEYWOOD SMITH thought the clamps had probably fallen into disfavour because they were removed too early. They should be left on at least three days. They had, however, the disadvantage of leaving a hole in the vaginal roof which might form the starting point of recurrence.

Dr. PURCELL said he did not use clamps as a rule, but he had used pressure forceps, leaving them on for thirty-six hours, but only if any difficulty arose in ligaturing the vessels of consequence at the time. The difficulty with

clamps depended upon the size of the uterus ; if the fundus could be brought down into the anterior fornix, nothing was more simple. In using the forceps they ought, if possible, to pass the finger up to the top of the broad ligament so as to have it well under control. At the Cancer Hospital they used chiefly silk ligatures, of which they left one end long, hanging out of the vagina. By this means they could always tell when the ligatures came away. He thought the method employed in the second case was the right one ; had the growths been larger, oöphorectomy or panhysterectomy would have been required.

Mr. J. W. TAYLOR had tried Doyen's method. Doyen employed special clamps so adapted that the whole broad ligament was well grasped. The operation was as in vaginal coeliotomy—the forceps being applied from above downwards. By this method he had performed the operation in fifteen minutes ; with the ligature it took half an hour or longer.

Dr. MACNAUGHTON JONES observed that the method adopted in the second case was a recognised one ; it was gratifying to hear of instances where that treatment was feasible.

Professor SMITH, in reply to the President, said that brain-like masses came away as soon as the curette was applied. He was glad to have Mr. Jessett's endorsement as to the value of examination under ether. He had used both clamps and ligature : the reason he preferred the former in this case was that the disease was limited, and he could get well outside it with the clamps. He left them on forty-eight hours, and had no trouble with them ; but the patient had some difficulty in passing water. The difficulty was probably mechanical, as there were four clamps on each side ; even the catheter was not easy to pass, owing to the urethra being retracted above the pubes. But he thought this might be an accident peculiar to this case. When he took off the clamps he found they had been so acted upon by the discharges that they could not be used again.

Mr. J. W. TAYLOR, F.R.C.S., of Birmingham, showed the following :—

- (1) TUBAL PREGNANCY, SHOWING RUPTURE OF TUBE, WITH SOME ENCAPSULATION OF THE BLOOD CLOT.
- (2) MYOMA OF THE FALLOPIAN TUBE.
- (3) CYSTIC MYOMA AND DOUBLE PYOSALPINX REMOVED BY PANHYSTERECTOMY WITHOUT PREVIOUS LIGATURE.

(1) The combination of encapsulation of the blood clot with extensive rupture of the tube was very rare. He had pointed out in a former paper that intra-peritoneal hæmatocele, with formation of a definite tumour, was common in tubal abortion but rare in tubal rupture. The specimen illustrated the fact that even when rupture had taken place it was possible for a localised hæmatocele to form and to show some decided signs of encapsulation.

(2) The tumour was the size of a walnut. It had developed in (or around) the Fallopian tube toward its uterine end, but there was a portion of unaltered tube between the tumour and the uterus.

On section it was seen to be a true myoma of the tube arranged almost concentrically round the tube, so that the mucous channel appeared to perforate the centre of the growth.

(3) In this case operation was undertaken under adverse circumstances. The patient was blanched by repeated hæmorrhages, her temperature was 104° F., and she was delirious. Owing to the complication of the pyosalpinx, complete removal of the appendages as well as removal of the uterus was absolutely necessary. He operated much in the manner of Doyen, that is, the uterus was removed as a breast would be amputated, without previous ligature; but by cutting close to uterus the vessels were not divided where they were still large, but after they had broken up into small branches; and the uterine arteries were secured after division. In this case he ligatured the broad

ligament also on one side in order to remove the pyosalpinx, but this was the only ligature put on before the uterus was removed. Both broad ligaments were then tied off below, the stumps were drawn down into the vagina, and a purse-string suture applied, so as to bring together and absolutely close the pelvic peritoneum. The patient was now making a good recovery.

Mr. BOWREMAN JESSETT thought that the case was one of great interest. Was there not a good deal of hæmorrhage from the ovarian arteries? He would ask Mr. Taylor also whether the ovaries and tubes were removed in the ordinary way, and whether the peritoneum was laced over? His own practice was to pass ligatures through the flaps, doubling these on themselves, and drawing the ligatures down through the vagina, which secured good drainage. He thought there was risk of after trouble if the peritoneum was laced up.

Mr. TAYLOR said that when only the smallest branches of the ovarian artery were divided near the fundus there was very little hæmorrhage. The peritoneal flaps were larger than when formed in the ordinary way, and, after inverting these into the vagina, he drew the peritoneal folds together with a purse-string suture passed from the abdominal aspect.

NOTES ON GYNÆCOLOGICAL CASES. By H. MACNAUGHTON JONES, M.D., M.Ch., M.A.O., F.R.C.S.I. & E.

The notes of the few cases that I record to-night are read because of their clinical and pathological, rather than their operative, importance. One of the inherent difficulties met with in clinical therapy lies in the fact that there is in reality no stereotyping of any diseased condition. Each type is influenced by so many associated quantities, that change not only the features of the original series, of which it is an example, but also the progressive phases of the developments in relation, course, and effects through which

the morbid process runs. The terms "diathesis," "temperament," and "constitution," so commonly referred to, are a few of those extraneous forces exerting their subtle influences in these modifications of type which are manifested in symptomatology and histological characteristics. As no two human faces can be found, on critical investigation, exactly alike in feature and expression, so no two examples of the same disease run through precisely identical phases. As this is true in speaking of the comparison between individual instances, so is it in regard to certain collective groups of disease which at different times have varying racial differentiations in their course and terminations. Such distinctive attributes are stumbling blocks in the way, not only of accurate classification, but also of systematic treatment. And they likewise throw a light on the unavoidable differences in the description and treatment of affections apparently similar, which are constantly found to emanate from equally reliable and eminent authorities. Many of the disputations between gynæcologists arise from the want of recognition of this dissimilarity in type constantly operating in affections of the pelvic organs of women. Pain, local and general distress, reflex consequences, disturbances in ovulation, disorders of locomotion, power of conception, sexual appetite, vary considerably under what appear to be precisely similar pathological appearances, the consequence being that the management and treatment correctly adapted to one case has to be altered or modified in another. In the case of drugs, this need for the recognition of such clinical distinctions is further increased by the individual idiosyncrasy to their therapeutical and physiological effects. Indications for treatment are dependent upon the position in life, the surroundings and social responsibilities of the patient. Nor is the operative department of this branch of surgery free from the influences which this diversity in type produces. An operation that, on pathological grounds, is both expedient and justifiable in the instance of one woman,

may be inexpedient and unjustifiable in another. It cannot be gainsaid that pain which is constant in its presence, severe or wearing out in its nature, thus interfering with sleep, capacity for locomotion, mental activity, and the proper discharge of the digestive functions, is one of the foremost incentives to operative interference. Yet it is a matter of the most common clinical observation that pathological changes in the pelvic viscera frequently bear no proportion whatever to the amount of suffering attendant upon their presence. This is not only true of the organ primarily involved, but applies to those abnormal conditions so commonly associated in pelvic disease.

In fact, the most important clinical symptoms are here usually dependent upon such associations. It is impossible to differentiate them, and to isolate in the connecting links in the chain of morbid pelvic change the particular spot in uterus, tube, or ovary, that starts the perverted nervous impulse. The gynæcologist has yet to be found who, before an operation, can be so certain of the limitation and nature of disease in the annexa and their surroundings, that he would stake his reputation on a correct prophetic determination of it. An American onlooker, I heard, recently exclaimed to the operator in the case of a spinal differential prognosis, when the dogmatic assurances as to the position of a growth were not accurately verified by operation, "I guess you feel pretty bad now." The diagnostician who is over-confident as to the nature and extent of the disease of the appendages, must, I should say, often-times have a similar experience when the ovaries and tubes are exposed to view. One fact is certain, that the pain and distress caused by ovarian and tubo-ovarian disease, have been repeatedly shown to have no correlation with the extent or character of the morbid changes present. This is exemplified through a case, the notes of which I shall read.

In operative procedures on the pelvic viscera the ever-varying and complex conditions found on opening the abdomen admit practically of no fixed rule in dealing with

them. The true surgical artist is he who, while conforming to broad and unalterable surgical principles, deals with each case and its complications as it presents itself to him at the time of operation, his resources limited by no rigid theoretical consideration, and his hand not held by any authoritative *ipse dixit*. Through such freedom of action can we alone hope for progress, and in no part of the human body is such liberty demanded more than it is in the surgery of the female organs of generation. It were well to bear this in mind in discussions, often futile, on this or that method of procedure, and in disputations over steps of operations, the bearings of which, in actual practice, when face to face with unexpected and novel difficulties, vanish, and where the surgeon has to fall back on his individual judgment and surgical instinct for guidance.

You will pardon these few comments introductory to the cases which I bring before you to-night. They are intended rather as of an apologetic nature, for these cases, viewed broadly, possess no features strikingly unusual in character, so far as their operative surgery is concerned. But each affords in clinical diagnosis and treatment a lesson that the most experienced gynæcologist may profit somewhat by, for is it not safe to assert that every time an abdomen is opened and the pelvis explored, he is a poor student who does not derive some fresh instruction, manipulative or pathological, as the case may be?

I shall not unnecessarily weary you with superfluous details of these cases, but confine myself to those important points that I consider it right to touch on, and which are salient to their consideration. I have to thank Mr. Bland Sutton for his invaluable co-operation in four of these somewhat obscure cases.

In another interesting case to which I refer (Case V.) Dr. Heywood Smith gave me his kind assistance at the operation. The administration of ether was faultlessly carried out in three instances by Dr. Dudley Buxton, thrice by Mr. G. F. Bailey, and once by Mr. Carter Braine.

Case I.—Large Ovarian Cyst, with Extensive Adhesions to Omentum and Bowel, Twisted Pedicle and Sanguineous Contents.—Removal and Recovery. The following short notes were furnished by Dr. Midwinter, the medical attendant in the case :—

History.—"Mrs. S. First noticed that there was a swelling on one side of the abdomen at Christmas, 1895, but attached no importance to it. Has had three children, aged at the time of operation, 11 years, 6½ years, and 3 years 10 months, and one miscarriage, between the first and second months of pregnancy in March, 1895. The last period came on three weeks before the operation, and was normal in colour and quantity. The periods previous to this had been normal, ever since the miscarriage in March, 1895.

"On February 22, 1896, she was suddenly (with no previous warning and without making any exertion) seized with acute pain, radiating all over the abdomen, but which later on was more localised in the right lumbar and iliac regions. She became pale, with white lips, faint, sighing, and the pulse was scarcely perceptible.

"When she recovered from this condition the pain was severe. The temperature rose to 104°, and she had indications of peritonitis. Her condition remained critical for three weeks, chiefly on account of her very feeble heart action. The pulse was weak, from 120 to 130. As the abdomen became less distended and painful, a mass could be detected occupying the right side. This gave the sensation of possessing fluid contents."

When the patient saw me in April, 1896, I found a swelling, occupying principally the right side of the abdomen, and extending as high as the right lumbar region. This evidently contained fluid. On vaginal examination a swelling was detected in Douglas' pouch, the uterus was enlarged, the cavity measuring some three inches, the fundus being felt well above the pubes. The cervix was soft, and the os patulous, admitting the point of the index finger. The breasts were enlarged and sensitive, the nipples turgid.

and there were dark areolæ studded with prominent follicles. The diagnosis lay between a possible tubal foetation with ruptured sac, or an ovarian cyst. The condition of the uterus and the state of the breasts, added to the suddenness of the symptoms referred to on February 22, made me suspicious of the former, while the regularity of the catamenia, added to the fact that the symptoms might also be due to hæmorrhage into an ovarian cyst, pointed to the latter. She had a history of a previous affection of the kidneys, and the presence on and off of albuminuria. Operation was determined upon, and carried out in April. The tumour proved to be an ovarian cyst, reaching from the broad ligament to the right hypochondrium. The omentum was closely adherent to its upper third, and the small intestine was also attached to its anterior surface by adhesions, as low as its pedicle. There were soft adhesions fixing the tumour posteriorly. The omentum and bowel were carefully detached. The pedicle was found rotated through three revolutions on its axis. The cyst was full of blood, partly fluid, partly coagulated. The pedicle was untwisted and secured, and the cyst removed, as was also that portion of omentum which had been adherent, and which was somewhat injured in its detachment. The patient made an uninterrupted recovery from the operation. About three weeks subsequently there were some symptoms of cystitis, but these rapidly subsided. The twisted pedicle, the adherent omentum and bowel, and the sanguineous contents of the cyst, accounted for the symptoms present on February 22.

Case II.—Ovaries and Tubes Removed for Persistent Oöphoralgia. Cystic Degeneration of Ovaries. Abnormal Fallopian Tubes with Irregular Ostia.—Mrs. H. This specimen I exhibit rather for its histological than its clinical features.

History.—The patient, a widow, age 40, suffered for years from severe ovarian pain. She had been, on and off, seen by me, and had been under various treatment for chronic

endometritis and cervical erosion. The uterus I curetted, and, notwithstanding the cure of the endometritis, the pain persisted. The left ovary could be felt behind the uterus, very sensitive to the touch. The patient herself insisted upon operation for the relief of the incessant pain, which was so agonising at times that her mental condition caused considerable alarm to her friends, and suicide was apprehended. These ovaries and tubes were removed, the pathological report furnished by Mr. Targett being as follows :—

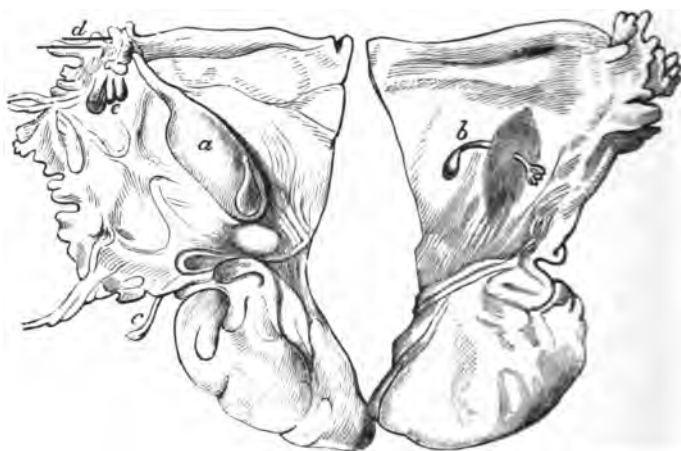


FIG. 1.

Ovaries ; meso-metria, and Fallopian tubes, viewed from behind. (*b*) Right meso-salpinx showing pedunculated cyst resembling hydatid of Morgagni (persistent end of Wolffian duct) ; accessory Fallopian tube (cyst in ovary not seen on the anterior surface) ; (*d*) three distinct ostia of left Fallopian tube ; (*a*) cyst with pedunculated cyst springing from it, similar to that at the right side ; three other small cysts are in this meso-salpinx (vide text), one (*c*) pedunculated.

“Right Uterine Appendages.”—The Fallopian tube, its osteum and fimbriæ are normal. Attached to the posterior surface of the meso-salpinx are two pedunculated bodies nearly half an inch long. The extremity of one of these bodies is dilated into a small cyst, so that it resembles a hydatid of Morgagni. The other body has a stouter pedicle.

becomes dilated towards its free extremity, and terminates in a minute ostium and fimbriæ. A bristle can be inserted into the ostium for about an eighth of an inch. The body has, therefore, the structure of an accessory Fallopian tube. The seats of attachment of these pedunculated bodies are very close together, and correspond in position with the horizontal tubules of the parovarium; their development is probably associated with these tubules, and the fimbriated body may be regarded as the persistent end of the Wolffian duct. The ovary shows much wrinkling of its surfaces at the upper pole, but the rest of the exterior is smooth and healthy. On section, an oval thick-walled cyst is displayed which measures an inch in chief diameter. It contains a little blood-stained fluid, but had ruptured during removal, hence the greater part was lost.

"Left Uterine Appendages.—The Fallopian tube and its fimbriæ are healthy; there are three distinct ostia leading out of the ampulla. The fimbriæ on the edge of the meso-salpinx are numerous, but appear healthy. Between the layers of the meso-salpinx there are four small cysts. The largest has an elongated outline, its long diameter measures nearly one inch, and is placed almost at right angles with the axis of the Fallopian tube. From the surface of this cyst springs a small pedunculated cyst like a hydatid of Morgagni, and this resembles the structure described in the right appendages. The remaining two cysts in the meso-salpinx are the size of a pea; they do not seem to be connected with the vertical tubules of the parovarium, one being close on the edge of the meso-salpinx, and the other crossed by these tubules. But with regard to the elongated cyst, the abdominal end of the horizontal tubules can be traced up to it. Hence it may have arisen in connection with the extremity of the Wolffian duct."

The naked eye appearance of the left ovary does not differ materially from that of the right. Its surface is less wrinkled, and on section a similar cyst is to be seen at one end of the organ. This had ruptured during removal. There is another small cyst in the substance of the ovary.

The result of the operation has been to remove the pelvic pain, but the patient's mental condition, which had been considerably weakened before operation, has not as yet materially improved.

Alban Doran and Bland Sutton are the investigators in this country to whom we are most indebted for our knowledge of such irregularities in the ostia of the Fallopian tubes as are here referred to. Let us contrast the pain and the pelvic distress experienced in this case with the following :—

Case III.—Severe Hæmorrhage from Uterine Fibroid. Oöphorectomy. Persistent Menstruation, with Relief of Hæmorrhage. History.—Mrs. P., aged 44, widow, no children, consulted me in August, 1895, for profuse menorrhagia which had commenced in 1894. Had never suffered any pain or pelvic distress, save slight dragging at the left side, and was not aware of any uterine affection until she consulted her medical adviser for the hæmorrhage, who then discovered that she had a uterine fibroid. I found on examination a fairly large fibroma, fixed in the pelvis, and immobile. The ovaries could not be felt. The patient had an extremely blanched appearance. I advised immediate oöphorectomy.

On operating, I found low down a pedunculated sub-peritoneal fibroid about the size of an orange, sprouting from the large tumour. This was removed. The uterus was quite fixed by adhesions, and with great difficulty the enlarged and diseased left ovary, I now exhibit (greatly reduced in size by keeping), was removed. On seeking for the right ovary there was considerable difficulty in finding it, and it was impossible to remove the annexa of this side satisfactorily, so bound down were they by adhesions and so compressed by the uterus. The patient made an uninterrupted recovery, but I was disappointed to find that menstruation still continued, though in a much less degree than before the operation, which was performed in August, 1895. I examined this patient on the 24th of last June.

She was quite an altered woman in appearance and general health. The uterus was smaller, and more movable. Menstruation continues, and, though still somewhat in excess, is in no way dangerous. Here was a woman who, as she herself expressed it to me, never had the least suspicion that there was anything amiss, and had never had any pain worth speaking of, yet in which all the morbid changes referred to were present.

Case IV.—Fibroma of Left Ovary in a Young Woman, aged 22.—The following is a rare and most interesting case to which I recently briefly referred in a discussion on Mr. Alban Doran's paper on Fibroma of the Ovary, at the Obstetrical Society :—

Miss H., aged 22. Consulted me for persistent sickness associated with periodical epigastric pain and considerable anæmia in April of this year. She had had various medical opinions, and had been subject to a variety of treatment. For eighteen months previous to seeing me the catamenia had been absent. These were the only symptoms present. I made a careful examination of the lungs, heart, and abdominal viscera, with a negative result. I suggested a Weir-Mitchell course, and a careful examination of the urine and blood, as I was apprehensive that the anæmia might be of a pernicious character. Her medical attendant acquiesced in this view, and accordingly she entered a medical home for treatment. The morning subsequent to her admission I determined to make another abdominal examination, and was surprised to find a movable tumour about the size of a small orange in the left inguinal region. The patient herself was unaware of its existence, nor had she suffered any pain other than the epigastric. I immediately notified to her parents and medical adviser the discovery of the tumour, and my determination to examine her under an anæsthetic the following morning. Going casually to the Home to arrange for the examination, which was to be made early the next day, I thought that I would again palpate the left side, when to my astonishment

I found that the tumour had disappeared and was nowhere to be found. Surmising that it might have been a fæcal accumulation in the sigmoid flexure, and finding some scyballæ in the rectum, I ordered an injection, thinking that I might possibly have dispersed a mass by manipulation. The following morning, under ether, I made a vaginal examination, and discovered a tumour lying between the uterus and bladder in the middle line, hard and movable. The choice lay between a dermoid cyst or a fibroma of the ovary. I determined its freedom from both bladder and uterus, though it was evident that by the distended bladder on the previous morning it had been raised from its pelvic position, to which it sunk when the bladder was empty. Two days afterwards I removed the tumour in the presence of Mr. Bland Sutton, who has himself examined it carefully, and is satisfied of its purely fibrous nature. It was encapsuled, and when cut across presented a pearly white and glistening appearance, showing to the naked eye wavy fibres. Sections of the tumour are shown under the microscope, and the following is the report received from the Clinical Research Association :—

“The ovarian tumour shows microscopically nucleated spindle-celled tissue which is arranged in very definite interlacing bundles. The coarseness of the tissue, the distinct formation of fibres, and their wavy arrangement are good reasons for regarding the tumour as a fibroma rather than a sarcoma. Sections have been made from different parts, and they all show the same appearances. The vessels in the tumour are numerous and well formed.”

The tumour, when cut across, I placed under running water for thirty hours, and sent it to the Clinical Research Association. The cut surfaces had a pearly white fibrous appearance. Unfortunately, owing to a misunderstanding, the specimen was not mounted for exhibition.

“The naked eye appearance of the small fragments of the ovarian tumour which have been preserved is somewhat like that of uterine fibroid. The cut surface shows white



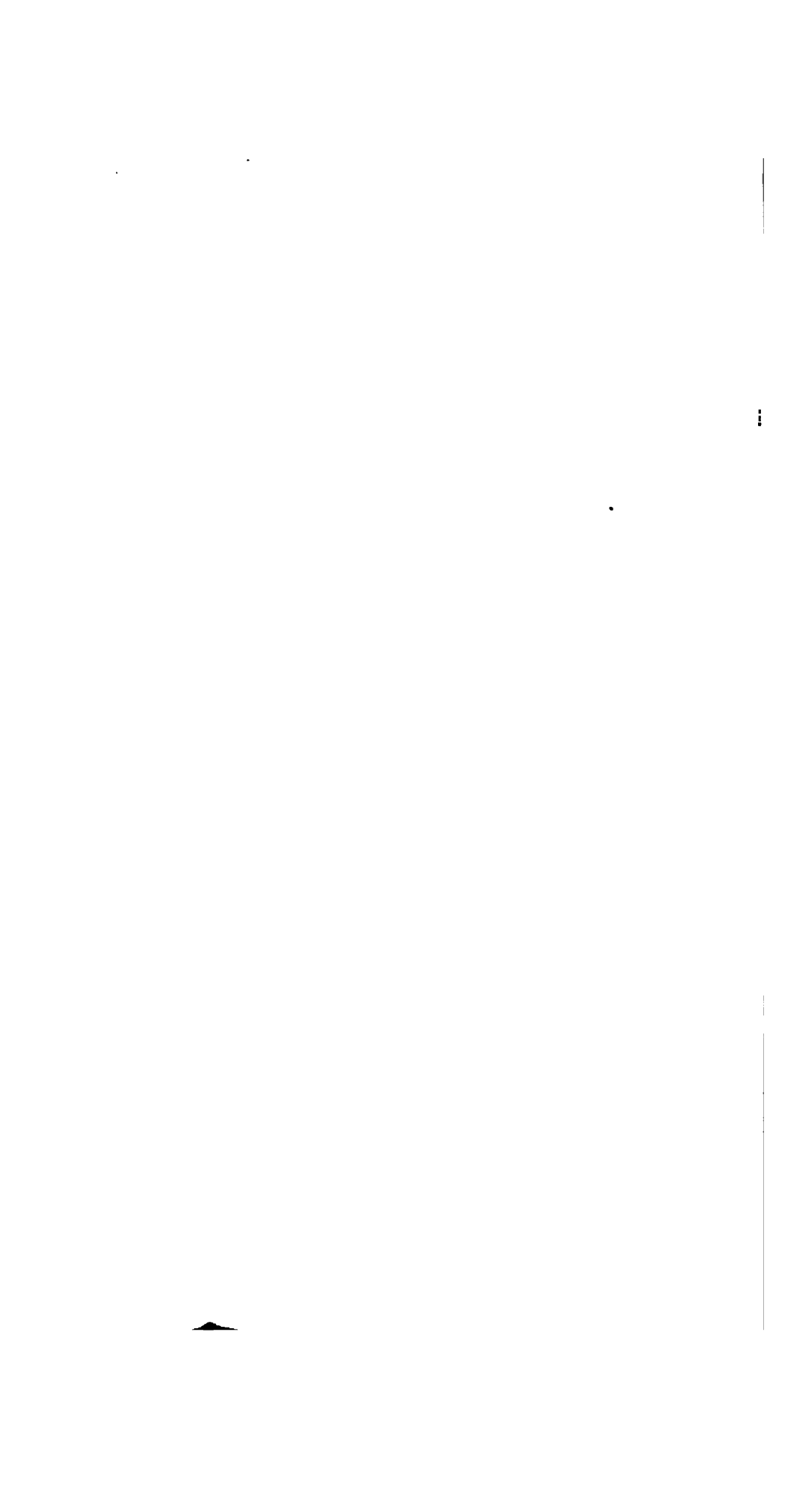
FIG. 2.

Microscopical section $\frac{1}{4}$ -in. *obj.* of fibromatous tumour of the ovary.



FIG. 3.

Microscopical section 1-in. *obj.* of fibromatous tumour of the ovary.



fibrous strands which interlace but are not arranged in whorls. Here and there small grey areas may be seen distributed among the white strands. There is a distinct capsule composed of thick white peritoneum and a subjacent layer of cellular tissues traversed by numerous vessels, some of which are of considerable size. Septa pass from this capsule into the tumour for a short distance, indicating that the tumour has a tabulated outline. The serous surface of the fragments is quite free from adhesions. The tumour as a whole feels firm and elastic, but less dense than the common fibroid."

The other ovary was not typically healthy, as there was some cystic proliferation, and it was very slightly enlarged. However, there was nothing to demand its removal.

Note in connection with this case, the youth of the patient, the absence of menstruation, the painlessness of the tumour, its extreme hardness to the touch, its freedom and mobility, and the associated movement with the bladder.

Fibroma of the ovary is a very rare pathological condition, and there are few such typical cases on record as the one I have cited, which, when I referred to it at the recent discussion at the Obstetrical Society, Mr. Alban Doran described as unique and typical of its kind.

The patient subsequently passed through her Weir Mitchell course, menstruated naturally after the operation, and left the Home in good health.

Case V.—Interesting Case of Pregnancy after Oöphorectomy and Removal of an Ovarian Blood Cyst.—Previous History.—On April 13, 1893, at this Society, I exhibited an ovarian blood cyst, which I had removed from a patient under peculiar circumstances. She was thirty years of age at the time of operation, and had been married for seven years, never having conceived. In 1883, at the age of 20, she had an attack of pelvic peritonitis. In 1884, she had a recurrence, which spread into general peritonitis of a most alarming character, and which nearly proved fatal. This was in January, 1884, and six months

later there was another attack. On and off, after this, she suffered from abdominal and pelvic pains, but gradually improved. In 1886, she was married; in 1889, she consulted me for a severe cervical erosion, and there was then decided enlargement of the left ovary. I treated her, cured the uterine affection, and sent her for a course to Woodhall Spa. During 1892, the recurrent pains from which she had suffered more or less for years became more constant, and at last, especially at the right side, were incessant. In February, 1893, I performed oöphorectomy. On opening the abdomen, the peritoneum was found extensively adherent to the bowel, which latter was opened for a short distance in trying to make the peritoneal incision. When the wound in the bowel was closed another peritoneal opening had, in consequence, to be made in the left inguinal region.

The sac of the left ovary was found about the size of an orange, and full of blood, completely bound down by adhesions, which were separated with difficulty. The cyst with the left tube were removed entire. On seeking for the right ovary it could not be found, *and it was only after considerable searching that it was detected attached to the pelvic wall, to which it was firmly fixed by adhesions, and considerably reduced in size.* The prudence of removing it was discussed, but in the face of the protracted hard operation, and the exhausted condition of the patient, it was considered wiser not to subject her to any additional shock, which the attempted removal of the firmly adherent and apparently atrophied ovary would involve. A drainage-tube was inserted after operation, and she made an uninterrupted recovery. Menstruation continued, and, on and off, she suffered again from pelvic pains in the right side, and in 1894, there was a distinct swelling to be felt in the right broad ligament. This disappeared, but there was always more or less distress and pain, especially with the menstrual periods. Towards the end of 1895 menstruation ceased, and I found that she was pregnant. She was delivered of a healthy male child by Dr. Taylor, of Richmond, on May 31, 1896. The case carries its own lesson.

Case VI.—Chronic Suppurative Endometritis with Salpingitis, cured by Curettage, Chromic Acid, and Iodoform, Drainage of the Uterus.—I shall condense the facts of this case, quoting it simply to show the effects of thorough curettage with iodoform packing of the uterus in the case of inveterate suppurative endometritis with salpingitis.

Mrs. H., aged 48, widow. Had suffered for years from an enlarged and retroverted uterus. Had also two or three attacks of pelvic perimetritis. There had always been more or less endometric discharge from the birth of her child twelve years previously. In November, 1891, she had an attack of pelvic peritonitis. This subsided under treatment, and subsequently she had a slight operation for hæmorrhoids and a small fistula of the rectum. The periods were always excessive.

Suddenly in January, 1893, having been subjected to a chill during menstruation, she had a severe attack of perimetritis, during which there was rather profuse hæmorrhage for a few days. This was attended by considerable fever, which lasted for nearly three weeks. The perimetric effusion was considerable. The uterus was forced down almost to the vaginal outlet. I feared at the time that there might be hæmatocele complicating the perimetritis. In the following month the purulent discharge recurred, and this continued, notwithstanding various forms of intra-uterine medication, and on two occasions a prolonged course of the bromo-iodine waters of Woodhall Spa. The general health remained good, and there was little pain, but the discharge was at times most profuse, requiring the change of four sanitary towels in the twenty-four hours. As these recurrences of discharge continued until the beginning of 1895, I determined to thoroughly dilate and curette the uterus. This I did on April 20, 1895. The uterus at the time of operation was enlarged, the cavity measuring four inches, retroverted and retroflexed, in which position it was fixed. On free dilatation a quantity of pus poured from an enlarged fundal cavity. Curettage was conducted with every antiseptic pre-

caution. A solution of chromic acid ʒj. ad ʒj. was applied subsequent to the use of the curette. The large cavity was packed with iodoform gauze, and this, after the first few days, was renewed from day to day, the cavity each time being wiped out with 1 in 5,000 perchloride of mercury solution, and the vagina packed with tampons of 1 in 5,000 of the same. Some slight discharge appeared at the end of the third week, but intra-uterine dressings were continued until it had completely disappeared.

The final result of this case was complete cure of the discharge, the reduction of the uterus to about one-half its size, and the restoration of mobility. The statement of the patient, in writing to me this month, over a year after operation was: "Present state of health excellent—never felt better in my life."

Case VII.—Case of Tubal Gestation. Operation and Recovery.—History.—Mrs. S., aged 38. There had been four pregnancies, and one miscarriage two years previously. Youngest child, aged 15 months. The catamenia were regular after the birth of this child. The patient had menstruated during previous pregnancies for several months. During the last pregnancy the catamenia continued for five months. A menstrual period commenced on April 5, the regular time, but did not terminate as usual, and there was a constant show for two weeks, during which period she complained of violent pain in the left iliac region, with constant nausea and attacks of faintness, and with pain in defæcation.

On May 6 she was admitted into Stanmore Cottage Hospital, complaining of pain, especially over the left side. There was a swelling in the left inguinal and hypogastric regions, and still more hæmorrhagic discharge from the uterus, the bowels moving with difficulty. I saw her in consultation with Dr. Hamilton Allen on May 14, and found the condition of things as mentioned. There was then considerable fulness in the left fornix. The os uteri was patulous, and there was sanious discharge from it. It


was decided to dilate the uterus and explore the cavity. This was done, with a negative result. At the same time the friends were told that an operation would in all probability be necessary. I saw her again with Dr. Allen on the 19th, and decided that if there were any change for the worse, abdominal section should be performed. From the 20th to the 22nd, pain and distension increased, and the temperature range, which previously had been nearly normal, varied from 100° to 102°. The bowels could not be moved by enema. On the 23rd she was operated upon. Mr. Bland Sutton was present, rendering me valuable aid during the operation.

On opening the abdomen, a large sac, extending above the umbilicus, was discovered. To the anterior surface of this the bowel was adherent in parts, and also the omentum. It was firmly fixed posteriorly, and quite impossible to separate. On tapping the sac, after careful protection of the bowel with sponges, it was found to contain semi-coagulated blood. The sac wall was, therefore, freely opened, and the contents turned out. The edges were pared, and the sack was stitched by interrupted fishing-gut sutures all round to the peritoneum, which was then brought together and sutured, leaving sufficient space for a drainage tube. The abdomen was closed by three sets of sutures, and a drainage tube left in. The temperature remained normal after the operation, and the tube was removed on June 1. The patient made an uninterrupted recovery. My first impression on seeing this case was that it was one of extra-uterine foetation, the date of which could not be determined upon from the previous history. I thought also that there might be a pelvic hæmatocele caused by the rupture of a hæmato-salpinx, and possibly due to an early miscarriage. I certainly was astonished on seeing the size of the sac, the thickness of its walls, and the extent of the adhesions. The contents were afterwards carefully examined for the presence of a mole, but such could not be found. No tube or ovary could be detected on the left side. There had

evidently been recurrences of hæmorrhage, and a recent bleeding within the few days prior to the operation explained the symptoms from which she then suffered, and the sudden increase in the size of the swelling.

Case VIII.—Case of Vaso-Motor Coloration of the Face with Pigmentary Changes associated with Menstruation. — The drawing I show was taken from a young woman, aged 22. The patient suffered from the most severe dysmenorrhœa and oöphoralgia. This has lasted for some three years, and first came on after a shock. I saw her last November, being indebted to Dr. Roe Carter for the case. There was a conical cervix, with the ordinary pinhole aperture external os. I divided the cervix, and she wore an intra-uterine stem for a short time. The operation had no material effect on the dysmenorrhœa. Subsequently I tried both faradisation and galvanism, also without effect. But what I wish to draw attention to especially is, the curious discolouration of the face, *much more marked than in ordinary menstrual chromodrosis or pigmentation of the lids*. I have not seen any case recorded exactly like the one I refer to. On two occasions I have seen the cheek ecchymosed exactly as if it had had a severe contusion from a blow, passing subsequently through the various phases of colouration. The circles under the lids, extending below the malar bones, often varied in hue, and these changes were frequently very rapid, varying from purple to a deep greenish black. Sometimes the forehead became involved, and the whole face would assume a purplish colour, the conjunctivæ sharing in the suffusion. These changes generally preceded the catamenial epoch, becoming intensified during its occurrence, and disappearing slowly after its close.

The PRESIDENT observed that he was much interested in Dr. Macnaughton Jones's case of fibroma of the ovary, as it was like one of his own. The patient was aged 15, and had never menstruated; the cervix protruded through the hymen, the uterus being pushed down by a mass above it. Mr. Langton operated, and the mass turned out to be a fibroma of the ovary. The case had never been recorded.



Dr. JOHN SHAW said he had operated a month ago on a fibroma of the ovary with twisted pedicle. As regards the question of pigmentation, he had seen two cases which were instructive when taken together: the first was at a ladies' college in London; he discovered that the dark colour round the eyes was purely artificial; but it had been done so skilfully as to impose upon all. The second case was genuine; he had seen the lady when travelling abroad, and the dark colour was so marked as to give the appearance, at a distance, of goggles.

Dr. MORTON asked whether the pigmentation might not be due to subcutaneous hæmorrhage? He had at present under observation a young girl of 13; in whom the discolouration was not round the eyes, but on both lips, and associated with vicarious menstruation.

Dr. HEYWOOD SMITH asked whether the pigmentation came on only at the time of the periods, and how long it took to pass off. It would be interesting to know the cardiac condition in this case, and whether the colour depended on nerve-irritation. He had a case of well-marked pigmentation at present in Warrington Lodge. He had seen a case of artificial colouration in which the doctor also was deceived.

Dr. C. H. F. ROUTH said that under certain circumstances, especially of uterine irritation, the glands and skin round the vulva and in the axilla might become as black as ink. He had seen a case of uterine disease in which the patient from time to time had marks on her back resembling those seen in cases of disease of the suprarenal capsules. She, by a course of Turkish baths, was cured.

Dr. MACNAUGHTON JONES, in reply, said he thought the dark colour was due to vaso-motor irritation rather than to pigmentation, and the ecchymosed effect was chiefly produced by extravasation. He had had another case of a patient who had spent some time in India; he thought at first that she had blackened her eyelids and the skin under the orbit, but he was able to satisfy himself that it was

due to pigmentation. It was as black as Indian ink. That was quite different from the present case, in which he had noticed the colour come on very rapidly, *e.g.*, after an electrical application. The curious feature about it was the extravasation. She had no cardiac disease, but she suffered from dysmenorrhœa.

THE BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, OCTOBER 8, 1896.

CLEMENT GODSON, M.D., PRESIDENT, IN THE CHAIR.

PRESENT : 30 Fellows and Visitors.

The following gentlemen were elected Fellows of the Society :—Thomas F. De Vane, L.R.C.P. and S.E.; J. Wheeler O'Brien, M.D., Sydenham, S.E.; W. Hamilton Allen, M.D., Stanmore, Middlesex.

The following gentlemen were proposed for election :—Charles Hollingsworth Clayton, M.R.C.S., L.R.C.P., Hampstead, N.W.; Walter Cooper, M.R.C.S., L.R.C.P., Barnstaple; Ernest A. D'Ombrian, M.B., B.S.Melb., London, N.W.; Henry Dutch, M.D.Bru., London, W.; Bedford Fenwick, M.D.Dun., M.R.C.P., London, W.; Charles Edwin Goodall, M.B., B.S.Melb., Melbourne, Australia; Thomas James Henry, F.R.C.S.Ed., Sydney, Australia; James Metcalfe, M.D.Bru., Bradford, Yorks; Thomas Howard Morgan, M.D., F.R.C.S.Ed., Gympie, Queensland, Australia; W. H. Christopher Newnham, M.A., M.B.Cantab., Clifton, Bristol; Herbert Snow, M.D.Lond., London, W.

VAGINAL HYSTERECTOMY FOR MALIGNANT DISEASE.

The President gave the following account of a case, from which Dr. W. A. Smith (Newport, Essex) showed the specimen. The patient, aged 50, single, consulted him in May, 1896. Catamenia regular till two years previously, then there was almost continuous loss of blood in small quantities for six or seven months, and afterwards more abundant, with occasional clots. For two months last

winter the bleeding ceased ; when it recommenced it appeared at irregular intervals, and sometimes very profusely. She suffered no pain whatever, but felt weak.

On examination, the portio vaginalis felt perfectly healthy ; the uterus was freely movable, anteverted, and apparently not enlarged. The sound was not passed, and no bleeding followed the examination. She was ordered pills of strychnine, quinine and ergotin, and hot douches, and the bleeding ceased for two and a-half months. It then came on much worse than ever before, whereupon he advised her to have the cervix dilated and the uterus explored. Accordingly she saw Dr. Smith, who curetted her and sent the scrapings to the Clinical Research Association. Mr. Targett reported that the specimens showed malignant disease, and vaginal hysterectomy was in consequence performed. The long duration of the symptoms was a point of special interest.

Dr. W. A. SMITH said that the operation was performed in the way advised by Mr. Jessett, and presented no special difficulties. The disease was in an early stage. The patient had done well, and was now almost convalescent. In answer to a question from Dr. Macnaughton Jones, he added that some years ago the patient had suffered from a purulent discharge.

Dr. MACNAUGHTON JONES observed that of late years it had been shown that there was not infrequently a transition from suppurative endometritis to sarcoma, and he thought this was a most important point in connection with malignant disease. The endometritis first assumes a fungating form, and then passes into sarcoma. This view emphasised the importance of early and radical treatment in these minor cases.

Dr. WM. TRAVERS thought the case showed the value of microscopical examination. He had recently a patient whose physical signs pointed to cancer ; but the microscope showed that the condition was benign, and she had borne out this opinion by recovering perfect health. By the use of the microscope many patients' lives might be

saved by the early diagnosis of malignant disease, and many others, where the signs were doubtful, might be spared grave operations when the disease was non-malignant.

Mr. J. H. TARGETT said that he had made a microscopical examination of the uterine scrapings from Dr. Smith's case, and had reported that the specimen was probably a columnar-celled carcinoma, though the appearances were somewhat doubtful. To make sure of malignancy in the tubular form of carcinoma, one required evidence of invasion of the tissues beneath the growth, and this it was almost impossible to obtain in the ordinary curettings which are submitted to the microscope. However, after considerable experience in these examinations, one could generally distinguish the malignant adenoma from chronic endometritis, even when there was no evidence in the curettings of invasion of the muscular coat. There was not the same difficulty in the squamous-celled epitheliomata, for the histological characters of such growths were quite distinctive, even in minute fragments of tissue.¹

THE EARLY DIAGNOSIS OF MALIGNANT DISEASE OF THE BODY OF THE UTERUS, AND ITS TREATMENT BY OPERATION, ILLUSTRATED BY THE RESULTS OF 70 CASES AND NUMEROUS SPECIMENS. By FREDERIC BOWREMAN JESSETT, F.R.C.S., Surgeon to the Cancer Hospital, Brompton and the Gordon Hospital for Fistula.

It is on account of the extreme difficulties that often exist in making an early diagnosis of cancer of the body of the uterus, that I venture to bring the subject before this Society, in the hopes that a discussion may be raised that may tend to elucidate this important matter.

¹ Since the reading of the above case I have made microscopic sections of the uterus removed by Dr. Smith, and found that there was unequivocal evidence of columnar-celled carcinoma in the specimen, though the disease was in an early stage of development.

The question naturally arises, why should there be so much difficulty in diagnosing these cases early? The answer is not far to seek.

First, until a very few years ago cancer—and by this term I include all disease of a malignant nature—was considered and believed to attack the body of the uterus but rarely. Therefore patients who may have consulted their medical attendant or physician for some offensive discharge or bleeding, were treated perhaps medicinally, without any vaginal examination being made, or as often occurred, this examination was made, and the os uteri and cervix were found to present nothing abnormal, beyond perhaps a little superficial ulceration or erosion, which possibly was treated by local application or an injection. In other cases far more numerous, no examination was made at all, the patient being supplied with an injection and some medicine, and assured that the symptoms were quite compatible with the change of life.

The second cause of difficulty—and I think this cause is far more common—is that women shrink from consulting anyone, first from the natural modesty and dread of an examination; and secondly, because they believe the slight hæmorrhage they experience is due to their age; and thirdly, from the fear of the verdict, as in our days patients are ever prone to suspect that anything abnormal they are suffering from may be cancer, and they like to keep the truth away as long as possible.

Another cause of difficulty is the obscurity of the symptoms. I have known patients with advanced disease only complain of a dull aching pain in their back and hips, accompanied perhaps with some leucorrhœal discharge, with occasional slight bleeding, yet the disease must have been present for a considerable time. Then, suddenly, a sharp hæmorrhage occurs, the patient seeks advice, to find she is the victim of extensive cancer of the body of the uterus.

In what manner, then, is an early diagnosis to be made?

There is only one way, viz., early and thorough examination of every case in which there is anything abnormal, no matter how trivial, in the natural functions of the uterus, and this applies with increased force to those patients who have reached or passed the climacteric.

But younger women, if suffering from menorrhagia or metrorrhagia, or vaginal discharges accompanied with weight and pain in the lower part of abdomen or back, must not be neglected, as it must be remembered that these patients often are subject to cancer of the body of the uterus.

As far as the symptoms of the disease are concerned they vary considerably, and there are not, so far as I have been able to ascertain, any fixed routine of symptoms applicable to all cases.

Pain.—In many cases the earliest sign that anything abnormal exists is a sense of fulness accompanied periodically by slight pain of a forcing or neuralgic character at the lower part of the abdomen; this is increased by exertion, long standing, or the jolting of vehicular travelling. If the bowels are constipated the pain is worse, there is a greater sense of fulness and pressure, and this is readily explained by the increased congestion of the parts attending these conditions.

These pains are seldom so great as to cause patients to seek advice, as after a night's rest, or keeping in the recumbent position for a time, the pain is usually relieved. As the disease increases the pain is intensified, and will be referred to the lower part of the back, but chiefly to the hips, probably from pressure on the obturator nerve; this form of pain, however, is not nearly so severe as when the disease involves the cervix and os.


Pain, then, in the early stages is an important symptom and must not be over looked; in many cases, however, patients complain of no pain until the disease has progressed to such an extent as to preclude all operative interference, that is, the disease has invaded the broad ligament.

Discharge.—The next symptom that follows is a slight discharge which attracts but little attention, or is looked upon as an ordinary leucorrhœal discharge and of no importance. In women, especially after the climacteric is passed, this discharge is of the *utmost* importance, and should never be passed over; a careful examination should be made, not only digitally but with the speculum to ascertain if the discharge comes from the uterine canal. The character of the discharge is usually slightly purulent and watery, occasionally blood stained. If a sound is passed and the cavity of the uterus explored, bleeding to a greater or lesser extent is caused. As the disease progresses the discharge increases, becomes more sanious and smells badly, and is often accompanied by sharp bleeding.

Hæmorrhage is a most significant symptom, and in a large majority of cases in which the disease is limited to the uterine cavity is the first, and may be the only symptom that causes alarm. In persons past the climacteric, bleeding must be looked upon with the greatest possible suspicion, and if this is accompanied by discharge and pain, I believe it is absolutely diagnostic of cancer. In younger people, of course there are many causes for menorrhagia and metrorrhagia, but in all cases a most careful and searching examination should be insisted upon.

Examination.—This has been the key-note of my remarks. How is this to be effected? In some cases the diagnosis of the disease is readily made. Digital examination will disclose much. The uterus in many cases will be found to be enlarged and heavy, the cervix somewhat harder than normal, and the os perhaps patent, admitting in some cases the tip of the finger. In other cases, however, in the most advanced stages of the disease, the os has a perfectly natural appearance, as in this specimen, in which you will see the uterus consists of a shell covered with smooth healthy-looking tissue, while the substance of the organ is converted into a soft pulpy sarcomatous mass of disease.

The enlargement or not of the uterus depends greatly



upon the nature of the disease ; in sarcoma the organ is, I believe, invariably enlarged often to a great size. In adeno-carcinoma the enlargement is not so universal or so pronounced. Then, again, in true scirrhus, as in this specimen, you will see that the uterus is even smaller than normal.

In many cases—indeed I think I may say in most cases—of early disease, digital examination reveals very little, and we are obliged then to go a step further and examine the organ by means of a full-sized speculum. By this means the os is often discovered to be eroded and redder than normal, an unhealthy discharge is usually seen escaping from the os, and if this be wiped away with a pledget of wool it will be observed to be slightly purulent, and somewhat watery and perhaps blood-stained, quite different to the ordinary uterine leucorrhœal discharge. This discharge has a faint disagreeable odour. On further examination with the uterine sound, the length of the canal will often be found to be increased, and the introduction and manipulation of the instrument causes bleeding. If all these conditions are present, I think we may be pretty certain that we have to deal with a cancerous uterus, but the diagnosis is not always certain, and in many cases either one or other of these symptoms are absent, in which case we should not be justified in condemning the patient, until we had made assurance doubly sure, by a more extensive examination, and seeking the aid of the microscope. For this purpose the patient should be placed under an anæsthetic, the uterine canal fully dilated, and by means of a curette a scraping from the cavity of the uterus obtained for pathological examination.

Even here we are beset with the difficulty that a portion of healthy tissue may be removed, and the pathological report would then be fallacious. Care must be taken then to dilate the canal thoroughly, and if digital examination does not enable you to make a definite diagnosis, be careful to remove scrapings from more than one part, and see that

these scrapings are submitted to the most searching microscopical examination by a thoroughly competent pathologist. *If this be done, I think there will be rarely any difficulty in deciding the true nature of the disease.*

Adeno-carcinoma is probably the most common form of cancer found on the body of the uterus; it often is found forming papillary growths projecting into the uterine cavity; these sometimes attain a considerable size. In other instances the endometrium appears to the eye quite free, while by careful examination of the uterine substance, growths will be seen dipping between the muscular bundles, and so obscure often are these, that macroscopically they may be overlooked, but when examined by the microscope the true characteristics of adeno-carcinoma are at once detected.

It will be readily understood from these remarks how difficult it is to diagnose this form of disease in its early stage. Some of the specimens I have here well illustrate this. This specimen, to all appearance, has nothing more than some thickening and hardening of the uterine tissues, the endometrium apparently being perfectly normal, yet microscopically all the true characteristics of gland carcinoma are illustrated. In this specimen we see the disease forming papillary growths into the cavity, while in this the disease has extended still further into the cervical canal. The symptoms of these three cases varied: in one there was but little hæmorrhage although the discharge was bloodstained; in another the pain was more of a forcing character, accompanied with discharge and sharp attacks of bleeding; while in the last case the bleeding was most excessive, necessitating the plugging of the vagina. This patient was quite blanched from loss of blood.

The next most common form of malignant disease is *sarcoma*. This form of disease is much more insidious in its character. Patients often do not seek advice until quite late, complaining merely of pain of a dull aching character round the waist and back; perhaps there is no disturbance of the uterine function until the disease has advanced some-

what considerably. Look at this specimen. This patient only had a discharge two or three weeks before she sought advice, and that not excessive, and only slightly coloured; she never had any hæmorrhage. When she was brought to me the discharge had been going on for about six weeks. Vaginal examination discovered the os soft, small and healthy; by the speculum a small fungoid mass was seen projecting into the os. The uterus was freely movable, yet at the operation, in removing the organ, the cervix with only slight traction was torn across, and as you will see the whole of the uterus is represented by a thin shell not thicker than a sheet of note paper, and the substance of the uterus is a mass of sarcoma, soft and friable. Yet this woman had no hæmorrhage excepting on examination, and then not by any means excessive.

In some instances sarcoma assumes a polypoid form, as in this specimen. In these cases the forcing, bearing-down pains are very marked, and in some cases in which the polypoid growth springs from the fundus, the uterus may become completely everted, the sarcomatous mass being found in the vagina on examination, and may readily be mistaken for an ordinary polypus, or, if large and ulcerated, for mushroom growth of the cervix and os.

Scirrhus.—The most uncommon form of cancer of the body of the uterus is true scirrhus. I have only met with one specimen; in this case discharge, of a serous, watery, badly smelling character, slightly blood stained, was the principal symptom. This form of disease nearly always attacks elderly people. The uterus is smaller than normal, and the pain is more of a neuralgic character. This beautiful specimen well represents this form of the disease.

Treatment.—Until quite recently I was under the impression that surgeons were all agreed that total removal of the uterus was the only recognised form of treatment in cases in which the disease was limited to the fundus, the uterus movable, and the broad ligament free. I was astonished, then, by reading a paper which the author, Dr.

Davies, of Liverpool, sent me, entitled, "Is Surgery a Cure for Cancer?" In this paper, referring to cancer of the uterus, he says: "The arguments advanced for the performance of hysterectomy are, I admit, of some force. They are (a) free discharge; (b) hæmorrhage; and certainly for a variable period of six weeks to six months, these symptoms are relieved. Nevertheless, the benefits are soon nullified by recurrence of the disease. The peritoneum becomes extensively infected, and the consequences are very painful. Fistulous communications between bladder, rectum and vagina follow; and the only difference is that the patient dies a peritoneal death instead of the easier death from infection of the liver."

Dr. Davies is led to these conclusions, I imagine, by the unfortunate results of his own cases, which at the time of his reading the paper were three in number, one of which he tells us died in fourteen days, and the other two within three months, from rapid recurrence.

I admit such results are very discouraging, and remind me of my own early experiences, in which my results were so unfavourable that I declared I would never remove another uterus for cancer. I, however, after that made more use of the *post-mortem* room, and first examined a large number of cases of patients who died from uterine cancer, and was much surprised to find how few of them had secondary deposits in other organs or glands, and how many died from uræmia from the ureters becoming involved in the disease.

From these examinations I came to the conclusion if the diseased organ could be removed early that patients would stand a very good chance of being permanently benefited. My colleague, Dr. Purcell, during this time continued to perform the operation with good results. Backed by this consideration, and by the successful results published by the German and American surgeons, I considered I should not be doing my duty to my patients if I allowed them to drift off the face of the earth without an effort being made, on my part, to save them.

I now have been operating in these cases for five years, and have no reason to regret having again practised and advised vaginal hysterectomy to be performed in suitable cases. If we cannot save all, we do some, and when we consider that all would have died if operative measures had not been adopted, I think I have no cause for regret or reproach.

To the end of 1894 I had performed 43 vaginal hysterectomies for cancer of the uterus ; 4 died from the operation, viz., one from shock, this was a very bad case, in which the uterus was very large, necessitating the combined abdominal and vaginal operation. Another had had continual hæmorrhage for some time before admission. Another died from intestinal obstruction due to a loop of intestine becoming adherent to the wound in the roof of the vagina, and the fourth from septic peritonitis. Since that time I have operated in 27 other cases, with two deaths.

Of the 43 cases before you :—

4	were	operated	on	in	the	year	1892
17	"	"	"	"	"	"	1893
22	"	"	"	"	"	"	1894

Of the 4 cases operated on in 1892, 1 is known to be well now, 1 died within the year from recurrence, 1 had early recurrence, and 1 was free from recurrence when last heard of.

Of the 17 cases operated on in 1893, 1 died from septic peritonitis, 6 had recurrence and died within a year ; of these 1 died three months after operation from secondary growth of the pylorus, 1 died nine months after operation from secondary growth of the intestines. There was no local recurrence in either of these cases. Three cases have been lost sight of, but were well when last seen. The remaining 5 cases are perfectly well at the present time—over two years after operation.

Of the 22 cases operated on in 1894, 5 had early recurrence ; 3 died from operation, viz., 1 from shock, 1 from intestinal obstruction, and 1 from peritonitis ; 1 died twelve

months after, from other causes, no local recurrence. Seven were well when last seen, nine to fifteen months after operation, and presumably are well now. The remaining 6 have been seen quite recently and are quite free from any recurrence whatever.

To further analyse these cases so as to make them apply to the title of this paper, I find in one case operated on in 1892, the disease was limited to the body of the uterus, the cervix and os being free. This case is known to be alive now, and was well when last seen. A second case had recurrence and died within the year.

In 1893.—In 7 cases the disease was limited or commenced in the body of the uterus; of these all recovered from the operation; 2 had recurrence within a year; 2 died of secondary growths, there being no recurrence locally; the remaining 3 are well now.

In 1894.—In 6 cases the disease was limited to the body; of these 1 died from intestinal obstruction after operation, 1 died within the year from recurrence, the remaining four are still well.

Thus, then, we have 15 cases of vaginal hysterectomy for cancer limited to the body of the uterus, or 20 per cent. of the total number operated on with one death. One is known to be well over three years after operation, 3 are known to be well over two years after operation, and 4, one year after operation.

These results are entirely at variance with the conclusions arrived at by Dr. Davies. I have here several specimens, and I may say that all the cases, in which the disease was diagnosed early, are free from disease now, and this only goes to strengthen my argument as to the paramount importance of making early and thorough examination of all cases of women suffering from any disturbance of the uterine functions, and advising total removal of the organ in all cases in which the uterus is mobile and the perimetrium free from infection.

There is much more that could be said upon this subject

and that I should like to say, but there is only one word I will add, and that is, I have heard it remarked, vaginal hysterectomy is a very easy and simple operation. This is a complete fallacy, as I can assure you in many cases it is a very difficult operation, and one often meets with complications that were little anticipated. In ordinary cases in which the uterus can be drawn completely through the vulva its removal is a simple matter, but in my experience these cases are like angels' visits, few and far between.

Appended will be found a complete table of all cases of uterine carcinoma operated on by me, also notes of a few typical cases. The conclusion to which I have arrived may be summed up as follows :—

(1) In all cases of women suffering from leucorrhœal discharge, do not hesitate to insist upon a vaginal examination.

(2) If on examination the discharge is seen escaping from the uterine cavity in a woman at, or passed, the menopause, which discharge is occasionally slightly coloured or offensive, dilate the canal and curette the cavity of the uterus for microscopic examination.

(3) If the report of the pathologist is unfavourable, at once urge total extirpation of the organ.

(4) Even in advanced cases, so long as the uterus is movable, I am convinced that much relief can be afforded and life prolonged by vaginal hysterectomy.

To my mind the man who will limit this operation only to those cases in which he can pull the uterus down through the vulva, is certainly not doing the best that can be done for his patient. One might just as reasonably argue that because a carcinomatous breast is somewhat fixed, or the glands affected, that the surgeon should not remove it. What surgeon would hesitate to operate in such a case ?

Moreover, in a somewhat large experience in the *post-mortem* room, I found the lumbar and sacral glands were free from infection in many cases in which the disease was far advanced.

HISTORIES OF THREE TYPICAL CASES OF MALIGNANT
DISEASE OF THE BODY OF THE UTERUS, ILLUSTRAT-
ING THE SYMPTOMS IN DIFFERENT FORMS OF DISEASE.

Case I.—R. B., aged 39, married, two children, youngest 12 years old. Patient has always been regular, never excessive. In April, 1895, noticed leucorrhœal discharge, and had some pain for two months. In June she consulted Dr. Barnes, Bexley Heath, who sent her to me. The uterus was slightly enlarged, and a viscid discharge was escaping from the os. She had had some metrorrhagia, but not excessive. Sound passed three inches, and caused slight bleeding. I ordered her hot water douches and ichthyl pessaries, and told her to let me see her again in a month. She, however, did not present herself until October, when the symptoms had become more aggravated; constant pain, dull aching. Discharge increased, slightly coloured and with a faint odour; she had had one or two slight attacks of metrorrhagia. The os admitted finger; no marked infiltration. On November 11 she was placed under an anæsthetic, the cervix dilated, and the cavity of the uterus explored with the finger. I could not, however, reach the fundus owing to the length of the uterus, which was much enlarged and heavy. The cavity was curetted for microscopic examination, and the cavity plugged with iodoform gauze.

The pathologist's report, which I append, was that the scraping was carcinomatous. On November 19, vaginal hysterectomy was performed. Some little difficulty was experienced, owing to the size of the uterus and the fatness of the patient. The patient made an excellent recovery.

Mr. Plimmer's Report.

"The uterus, immediately after removal, measured $4\frac{1}{2}$ inches from fundus to cervix, and $3\frac{1}{2}$ inches across at insertion of Fallopian tubes. In its interior, projecting from the fundus, is a polypus which measures $1\frac{1}{4}$ inches in length. There was no ulceration. On microscopic examination the

mucous membrane was seen to be the subject of carcinoma. There was an enormous hypertrophy and hyperplasia of the gland tissue covering the polypus, and covering the uterine walls to about 1 inch from the internal os, and this gland tissue was seen burrowing and destroying the muscular layer to varying depths; in the thickest part of the wall of the uterus there were also nodules of cancerous cells right in the muscular tissue. There was an enormous amount of round-celled infiltration, and this, and the quantity of karyokinesis, showed that carcinoma was growing with great rapidity.

"On November 5 a scraping was examined; the scraping came evidently from the polypus, and the diagnosis of adenoid cancer was made, which the above condition of the uterus, when removed, quite confirmed."

Case II.—J. H., aged 65, married; two children; enjoyed good health. Was brought to me by Dr. Netherclift (Canterbury) on January 1 of this year. Only six weeks previously she first noticed a little discharge, occasionally coloured; never much bleeding. Complained of a good deal of pain round waist and hips, extending down the legs. She consulted Dr. Osborn (Dover), who examined her and at once detected malignant disease of the uterus, which was confirmed by Dr. Netherclift in consultation. On examination I found the uterus enlarged, softish and freely movable. Os was quite free from disease. A fungoid mass was projecting into the cervical canal, which bled freely on examination. Vaginal walls quite free. Operation advised.

On January 4, with the assistance of Dr. Purcell and Mr. White, Dr. Netherclift being present, I performed vaginal hysterectomy. A good deal of difficulty was experienced owing to the excessive friability of the uterine tissues. After the cervix had been fully freed, and the anterior and posterior peritoneal *cul-de-sac* opened on only slight traction, the cervix tore across. I then had some difficulty in seizing a sound part of the body. I ligatured the right broad ligament in segments first, and freed the

uterus on that side ; then by carefully introducing my hand I drew down the fundus and ligatured the left broad ligament. The ovaries and tubes were removed after the uterus had been extirpated. The patient made a steady convalescence, and left the Home three weeks after the operation. She died shortly after quite suddenly from heart failure.

As will be seen by the specimen, which is much torn, it consists of a mere shell of uterine tissue covered by peritoneum, but in no place had the disease extended beyond the uterine tissues.

The pathologist (Dr. Plimmer) reports :—"The case is one of sarcoma, mostly round-celled, beginning apparently just outside the glands, which are in places destroyed. There is a good deal of cell division going on, indicating rapidity of growth, and some hæmorrhage in places."

Case III.—Mrs. C., aged 60, married ; six children. Sent to me on January 6 by Dr. Frith (Hastings), suffering from excessive hæmorrhage, the result of malignant disease of the uterus. She had always enjoyed good health until the present attack of hæmorrhage. It appears, however, that she had had a slight discharge for some months, and had consulted a medical man on account of slight bleeding. Little notice, however, was taken of it, and the patient thought no more about it, suffering no pain or inconvenience until present attack of hæmorrhage.

Present state.—There is a large vascular mass felt occupying the whole roof of vagina. Exceptionally vascular ; bleeding somewhat profusely on examination—so much so as to enforce plugging of the vagina.

The growth is quite free from the vaginal walls, but appears somewhat fixed in front and to the left, so much so that it was explained to the friends that it might be impracticable to remove it, and the question of curetting and freely cauterising was discussed and advised as a palliative measure, should it be found impracticable to remove the entire organ when the patient was anæsthetised.

On January 11, with the assistance of Dr. Purcell and

Mr. White, the patient being anæsthetised by Dr. English, on examination it was decided that, as giving the patient the best chance of a permanent recovery, to remove the whole organ. This was done without any very great amount of difficulty, although owing to the size of the uterus it was tilted not without trouble. There was very little hæmorrhage. A glass drainage-tube was inserted, and a self-retained catheter placed into the bladder. Patient bore the operation very well. She had a restless night, temperature 101°. No vomiting or tenderness. The temperature rose during the day to 103°.

January 13.—Had better night, temperature 102°. Gauze packing removed and vagina well syringed. As there was nothing in the drainage-tube this was removed.

January 14.—Improved; temperature dropped to 100°. No vomiting or tenderness.

January 15.—Still slight improvement; the temperature at night risen to 101°. No tenderness over abdomen, or vomiting. During the night, however, she was seized with violent vomiting, bringing up what to all appearance looked like disorganised blood. She rapidly sank, and died on the morning of the fifth day.

The unhappy termination in this case is, I think, chiefly to be attributed to the difficulty—nay, the impossibility—of rendering the vagina aseptic. From extreme vascularity of the growth projecting into the vagina, it was imperative to keep the vagina plugged, and anything in the way of douching was impracticable, owing to the hæmorrhage.

From an examination of the specimen, which is a very beautiful one, it is a matter for great surprise that there were not more symptoms. Yet this patient had been getting about, never complaining of pain or discomfort until this severe attack of hæmorrhage.

Remarks.—The lessons to be learnt from these cases are, I think, most important. In the first case, had the disease not been discovered, in what a short time might we have expected it to have increased and developed into a similar

LIST OF CASES OF VAGINAL HYSTERECTOMY
FOR MALIGNANT DISEASE, PERFORMED BY
FREDERICK BOWREMAN JESSETT, F.R.C.S.

No.	Month.	Name.	Age.	Condition.	Children.	Disease.	Remarks.
	1892						
1	Mar.	A. C....	37	M.	0	C. Body	Free from recurrence.
2	July	M. E....	53	M.	6	C. ...	Lost sight of. Well when last seen.
3	July	W. C. S.	46	M.	2	C. Body	No recurrence when last seen.
4	Oct.	L. P....	57	M.	2	C. ...	Recurrence in six months.
	1893						
5	Jan.	E. B....	38	M.	4	C. ...	" " one year.
6	May	A. K....	36	M.	0	C. ...	" " a few months.
7	July	C. I. E.	42	M.	0	S. Body	Recurrence. Died in nine months.
8	"	E. S. ...	52	M.	3	S. "	Well when last seen six months ago.
9	Feb.	H. D. ...	58	M.	6	C. "	No recurrence.
10	July	S. J. ...	63	S.	0	S. "	Recurrence. Died in six months.
11	"	E. H. ...	55	M.	2	S. ...	Died; septic peritonitis.
12	"	H. S....	55	M.	3	C. Body	Secondary deposit in intestines. Died nine months later. No local recurrence.
13	"	H. K. ...	54	M.	8	S. ...	No recurrence.
14	Aug.	E. A....	32	M.	5	C. ...	Recurrence in a few months.
15	"	E. D....	57	M.	4	C. ...	Secondary depos. ; pylorus. Died three months later. No local recurrence.
16	"	M. J....	41	M.	2	C. ...	No recurrence.
17	Sept.	C. L....	45	M.	0	C. Body	" "
18	Oct.	M. J....	33	M.	2	S. "	" "
19	Dec.	A. S....	47	M.	3	C. "	Well when last seen.
20	"	A. G. ...	52	M.	1	C. "	Recurrence within six months.
	1894						
21	Jan.	K. F....	45	M.	0	S. ...	Free from recurrence.
22	"	F. S. I.	44	M.	0	C. ...	" " when last seen.
23	"	R. L....	47	M.	2	C. Body	" " Lost sight of.
24	Feb.	E. I. C.	62	S.	0	S. "	No local recurrence. Died six months after.
25	"	E. C....	44	M.	13	C. ...	No recurrence.
26	Mar.	E. B....	31	M.	6	C. Body	Died; intestinal obstruction.
27	"	L. M. ...	47	S.	0	C. ...	Rapid recurrence.
28	April	A. M. ...	31	M.	4	C. ...	Recurrence within six months.
29	"	M. S....	54	M.	10	C. ...	Free from recurrence.
30	"	F. R....	57	M.	3	S. Body	" "
31	"	H. O. ...	40	M.	5	C. ...	Lost sight of.
32	May	S. L. ...	56	M.	3	C. ...	Free from recurrence when last seen.
33	"	E. P. ...	40	M.	0	C. ..	Free from recurrence.

LIST OF CASES OF VAGINAL HYSTERECTOMY—*Continued.*


No.	Month.	Name.	Age.	Condition.	Children.	Diseases.	Remarks.
34	June	A. L....	37	M.	2	C. Body	No recurrence.
35	July	A. B....	52	M.	7	C. "	Free from recurrence when last seen.
36	"	E. D....	46	M.	3	C. ...	Recurrence in five months.
37	"	E. C....	43	M.	1	C. ...	Combined operation. Died shock.
38	Aug.	B. R....	40	M.	2	S. ...	Well when last seen.
39	Sept.	F. S....	47	M.	2	C. ...	Died; peritonitis.
40	Oct.	L. N....	68	M.	3	C. ...	Lost sight of.
41	Nov.	E. S....	40	M.	7	C. ...	Rapid recurrence.
42	"	A. L....	44	M.	5	C. Body	Lost sight of.
43	"	E. H....	53	M.	0	C. ...	No recurrence when last seen.
1895							
44	Jan.	A. M. P.	43	M.	5	C.	
45	Mar.	M. D.	28	...	...	C.	
46	"	E. B....	50	M.	...	C. ...	Recurrence in a short time.
47	"	E. H....	59	M.	...	C.	
48	April	E. C....	52	M.	...	C.	
49	"	S. E....	39	S.	...	S. ...	Quite well at present time.
50	"	F. M....	47	M.	...	C. Body	" " "
51	May	E. R....	44	M.	...	C.	Early recurrence.
52	"	S. L. ...	50	M.	3	S. Body	Quite well when last seen.
53	June	E. S. ...	54	M.	2	C.	" " "
54	July	S. H....	57	M.	7	C.	Early recurrence.
55	Aug.	H. A.	35	M.	5	C.	" " "
56	Sept.	A. W.	41	M.	2	C.	No recurrence at present.
57	Nov.	R. B....	39	M.	2	C.	" " "
58	Dec.	A. R....	50	M.	3	C.	" " when last seen.
59	Sept.	A. K....	47	M.	5	C.	Combined ab. and vag. No recurrence.
1896							
60	Jan.	L. H....	65	S.	0	S. Body	Good recovery. Died later; syncope.
61	"	E. C....	60	M.	4	C.	Died; septic peritonitis.
62	"	C. S. ...	55	M.	4	C.	Early recurrence.
63	Mar.	M. H.	38	M.	2	C. Body	Recovery.
64	"	E. H.	43	M.	4	C.	"
65	"	M. W.	30	M.	3	C.	"
66	April	M. M.	44	M.	3	C.	"
67	"	C. N....	57	M.	4	C.	"
68	May	F. T....	60	M.	11	C.	"
69	June	J. D. ...	48	M.	2	M.	"
70	July	F. S....	49	M.	5	M.	"

condition to Case III.; in which the operation was undertaken more with a view of prolonging life and relieving symptoms than with the hope of eradicating the disease, yet even in this case, advanced though it was, had the patient recovered from the operation, I think there was a fair prospect of the disease not recurring. Had the disease been discovered earlier, I have but little doubt the operation would have been successful, and the patient would have lived her allotted time of life without recurrence.

In the second case, it is very extraordinary that such amount of disease should exist and yet be, as far as it is possible to discern, entirely limited to the uterus, which had been reduced to merely a shell, and that there should have been no symptom until so late. Had this patient presented herself earlier, and the disease discovered, how much better chance she would have had of permanent benefit.

The PRESIDENT, in thanking Mr. Jessett, in the name of the Society for his valuable paper, observed that it was only a few years ago that Dr. William Duncan read a paper on the subject, at a sister Society; and the almost unanimous verdict, in view of the large immediate mortality, was that vaginal hysterectomy for cancer was an unjustifiable operation. Now it was a recognised procedure; and even in the cases where the disease seemed to be most advanced, there was often no recurrence. In a case he had seen some time ago the patient for a long time would not see a doctor, because her daughter had died as the result of an operation; and it was not until she had had several severe hæmorrhages that she consulted him. Operation was consented to, and Mr. Jessett performed it. The patient remained well at the present time, after an interval of two years.

Dr. PURCELL presented a table of 63 cases operated on since 1884. The mortality from the operation was 12, or 19 per cent.



	No. of cases of the operation.	Deaths.	Recoveries.
1884... ..	1	—	1
1885... ..	1	—	1
1887... ..	3	1	2
1888... ..	2	1	1
1889... ..	4	1	3
1890... ..	5	—	5
1891... ..	7	1	6
1892... ..	8	1	7
1893... ..	7	1	6
1894... ..	10	4	6 { 1 died 22nd day. 1 " 35th "
1895... ..	9	2	7
1896... ..	9	—	6
Total...	63	12	51
Percentage	19'04 per cent.	mortality.	80'99 per cent. recoveries.

The after-results were as follows :—

1	alive after 12 years.
3	" " 6 "
3	" " 3 "
12	" " 2 "
11	" " less than 2 years.

That is, of 51 cases that recovered from operation, 30 were still alive, whilst 21 had died of recurrence; giving a percentage of 58·8 cases alive and free from recurrence. The average age of the patients was 41·5; and the extreme ages 25 and 58. Only 1 patient was single; the average number of pregnancies of the remainder was 4·3. He congratulated Mr. Jessett on his excellent results. Mr. Jessett's mortality in his recent series was only about one-half his own. In explanation of his own mortality, he might add that he began operating when the *technique* was less defined than at present; indeed, he performed the first vaginal hysterectomy in England, his first case being still alive and well. Further, he had not picked his cases; on the contrary, he had operated on some advanced cases, at the desire of the patient for relief, somewhat against his own judgment. He endorsed the recommendation that when the external os

was apparently sound, in doubtful cases, the uterine cavity should be explored and scrapings examined microscopically. If cancer of the body caused the uterus to be too large to be extirpated *per vaginam*, it is better to operate by the combined method, viz., by abdominal section and by the vagina, as done for large fibroids. He had shown before the Society from time to time specimens of very far advanced cases, some of which he would now treat by the chloride of zinc method. For the first few years he performed vaginal hysterectomy under the ban of the profession, since which the operation has become recognised and performed by many.

Dr. R. T. SMITH congratulated Mr. Jessett cordially, and thought that he and Dr. Purcell had thoroughly justified their positions as surgeons to the Cancer Hospital. The frequent obscurity of symptoms and the absence of pain were familiar points, and he thought the subject of greatest interest was the possibility of recurrence; after the record which they had had presented to them they would be greatly encouraged in this matter. He thought Mr. Jessett had fully proved his contention that the only rational treatment for carcinoma of the fundus was early and complete extirpation.

Dr. MACNAUGHTON JONES said that he, like others, had been looking forward to this paper with great interest, but he thought that its title would be more exact if it were called "The Justification of Vaginal Hysterectomy." That, however, was not properly speaking, the subject that they had come to discuss, which was rather "The Early Diagnosis of Cancer of the Body of the Uterus." This question often placed them on the horns of a dilemma, for not uncommonly when a patient had been some time under observation they felt pretty sure of the threatening development of malignant disease, while the symptoms were still doubtful; then, perhaps, a little later the patient passed into other hands; cancer was immediately diagnosed and an operation performed, and the first attendant was more or less in disrepute. They now knew that the old exclusively

cellular theory of cancer was disproved, and that it could begin in the connective tissue, in the ovaries, and in the tubes. A great deal had been done in this direction by the admirable researches of Dr. Mary Dixon-Jones. They knew that cases of erosion might pass on into cancer, and that follicular conditions might become the starting-point of degeneration. For his own part, he looked on these follicular conditions as among the most ominous. They knew that diffuse sarcoma might supervene on suppurative endometritis; and that one kind of sarcoma (*deciduoma malignum*) might follow gestation. It would be a great advance if they could throw some light on these preliminary conditions. Total hysterectomy was now universally established, and the discussion as to the relative value of supra-vaginal amputation and total extirpation might be looked on as prehistoric; the only modern method of treatment was panhysterectomy. No longer could one surgical rule be applied to cancer of the breast and another to cancer of the uterus. The important thing to remember was that conditions predisposing to cancer ought to be thoroughly treated, and not left half cured, for the symptoms of early cancer were often ambiguous. The patient might have no pain, and, indeed, she might know nothing of her condition. While he did not wish to underrate the value of the microscope in diagnosis, he must remind them that it was not infallible. The examination of mere scrapings was not reliable. Thus twelve years ago he freely curetted a fungous growth of the uterus, and then used chromic acid. A distinguished pathologist and microscopist pronounced it to be malignant; yet the patient was still alive and well. Hæmorrhage was the most decisive symptom; whilst in cases of diffuse sarcoma there might be, in addition, shreddy patches passed. These symptoms might be absent, however, when sarcoma was sub-peritoneal; whilst when it was parenchymatous the bleeding might be much the same as from a fibroid. He had sometimes noticed a peculiar appearance of the vaginal roof in these cases; it became

leathery, and yellowish, with pinkish patches. In forming a diagnosis, a former history of erosion follicular conditions, or suppurative endometritis ought to be taken into account.

Mr. FRED EDGE (Wolverhampton) wished, as a younger surgeon, to thank Mr. Jessett for his paper, which was, he thought, most encouraging to those who were beginning. He had himself performed vaginal hysterectomy in ten cases, but not one of them was for cancer, because he had not seen one case in which he felt he could remove the whole disease, but it would be worth remembering that even if the disease seemed rather advanced, permanent good results might still be obtained.

Mr. HEDLEY BARTLETT (Saffron Walden) said he was present with Dr. Smith at the operation to which the President had referred. He then realised how difficult the operation was; it was very difficult to get the uterus down, owing to the narrowness of the vagina. After the uterine arteries and broad ligaments had been secured, there was still a good deal of oozing, apparently from the flaps. He would like to ask Mr. Jessett how he treated such a condition?

Mr. BOWREMAN JESSETT, in reply, said that Dr. Smith's case was important, because had it not been for the discernment of the President and himself, the patient might have drifted on, unrelieved. It also showed the value of microscopic examination. He agreed, however, with Dr. Macnaughton Jones that the microscope could not always be relied upon, and three or four competent pathologists might all give different opinions, not from any difference of opinion, but because they happened to examine different portions of tissue, some of which might be healthy. In answer to Mr. Bartlett, the bleeding might be due to incomplete ligature of the broad ligament; or it might come from the posterior vaginal artery, or from venous oozing from the stump. He thought Dr. Purcell had been unduly modest about his cases; many of which were operated on before the *technique*

of the operation was so well understood as now. His own early cases had been so unfavourable, that for a time he gave up the operation, and they were not included in his list. The late results at the Cancer Hospital had been very satisfactory, and they had had seventeen or eighteen cases this year without a death. He agreed with Dr. Macnaughton Jones as to the bad tendency of erosions, follicular degenerations, and suppurative endometritis, in persons predisposed to cancer ; such cases should always be well watched, and thoroughly cured. As long as malignant disease was confined to the uterus, there was often no pain. He had noticed the vaginal appearances that Dr. Macnaughton Jones spoke about, but he thought they were not seen when the disease was limited to the fundus ; when found associated with malignant conditions of the cervix, they were probably due to direct extension of the disease.

*ORIGINAL COMMUNICATIONS***A CLINICAL AND PATHOLOGICAL SUMMARY OF DECIDUOMA
MALIGNUM.****BY H. MACNAUGHTON JONES. M.D., F.R.C.S.E.**

THAT an affection of the uterus, a description of which has hitherto found no place in any gynæcological text-book, should have recently attracted so much attention, and have caused such frequent discussion, is not a little remarkable. Already in the pages of this journal J. J. Macan has contributed an analytical digest of the discussion on Carl Ruge's communication to the Berlin Obstetrical and Gynæcological Society, as well as a summary of the communication itself. He has also furnished an abstract of Fraenkel's paper (*Arch. f. Gynaek.*). Therefore his readers are already in possession of many of the pathological views of those authorities who have investigated the deciduous changes in relation to hydatid moles. Now that its etiology, symptomatology, and pathology are more clearly defined, it may be of interest to briefly summarise the pathological and clinical facts connected with it, and which, to those who have investigated its nature, seem to warrant its being placed in a distinct category by itself amongst the malignant affections of the uterus. I am now enabled to do this through the able summary of the subject by Maurice Cazin, in *La Gynécologie*, of February, 1896, of which this communication is practically an abstract. While prior to the recent discussion at the Obstetrical Society of London (April, 1896), no special attention was drawn to the subject in England, it was well known that in

1889 Säger distinguished under this title some malignant tumours composed of deciduous or placental elements having special characteristics apart from other uterine neoplasms ("Zwei aussergewöhnliche Fälle von Abortus"—"Ueber Sarcoma uteri deciduo-cellulare"). And again, in 1893, he drew attention to these deciduo-cellular sarcomata, and other deciduous tumours of the uterus. Säger's observations on the malignant character of these degenerations were followed by those of Pfeiffer, Chiari, Müller, Gottschalk, Schmorl, Kaltenbach, and others. In France, Nové-Joesseland, Lacroix, Pavo, Jeannel and Beach recorded cases in 1893.

Maier, in 1875, published in the *Archives of Virchow* two observations on tumours of the body of the uterus composed of decidual tissue, one of which was afterwards shown by Hégear to have died of a malignant affection considered to be cancer of the uterus.

In 1895 Bacon published a case in the *American Journal of Obstetrics*, and in the same year, Whitridge Williams recorded another, in which there was rapid vulvar metastasis two weeks after labour. The rapidity of this would appear to have been due to thrombus. Recalling the facts of cases in which certain clinical features, answering in every respect to those of malignant deciduoma, have occurred to me I cannot but think that the want of *accurate* histological differentiation has been the explanation of the non-recognition of this special malignant type of uterine growth and degeneration. Marchand considers that the deciduoma is of an epithelial nature, and several of the French authorities are at issue between the strictly decidual source of the growth, and its purely sarcomatous character. Maurice Cazin emphasises as an important histological and differentiating feature of these cells, that there are no inter-filamentous, or inter-cellular connections present. The presence of a large giant cell, resembling the decidual cell of Friedländer, is characteristic of these deciduous tumours, and they are present in the secondary nodules situated in the surrounding neoplasm, retaining the same type

as in the original tumour. This proliferation occurs also in the ovary in the infected cases. In addition to these characteristic giant cells, there is a basis of tissue approaching the sarcomatous form, which invades the other tissues of the organ, into which hæmorrhagic infiltrations occur, and a process of necrosis sets in. Such secondary changes may interfere with the true histological features of the neoplasm. There is no definite arrangement of the cells, neither in size, form, aggregation, nor number, and the appearances are quite distinct from those seen in epitheliomatous growths of a pavement character. With reference, however, to this last point, Marchand regards the growths as distinctly of a carcinomatous nature, having special relation to the development of the ovum. He believes that the tumours are epithelial, having their origin in the syncytium (uterine epithelial layer of the chorion) and the ectodermic epithelium. Hence he looks upon them as tumours of the serotina. The differentiated protoplasmic masses, cells, and trabecular and retiform tissues, are derived from the syncytium. Molar pregnancies, he considers, favour the production of malignant neoplasms, but he does not believe that the decidua cellules, properly so called, participate in their formation. Maurice Cazin well insists that it is important not to speak of a deciduoma, when we are simply dealing with an ordinary sarcoma, through confusion between the cells of the latter and those of the former.

Through the uterine wall there is found an invasion of this neoplastic tissue, and quite apart from the giant cells are small round cells of a sarcomatous type. This bed of tissue is traversed by vessels, the coats of which have been destroyed, the lumen limited only by the neoplastic tissue itself. This tissue and cell invasion gradually supplants, by substitution, the normal uterine wall. But the giant cells are quite distinct from those large cells seen in ordinary sarcoma. The repartition and distribution of these decidua giant cells is very irregular. The consequence of this degeneration is a superficial zone of necrosis, associated with hæmorrhagic infiltration, due to the vascular condition just referred to.

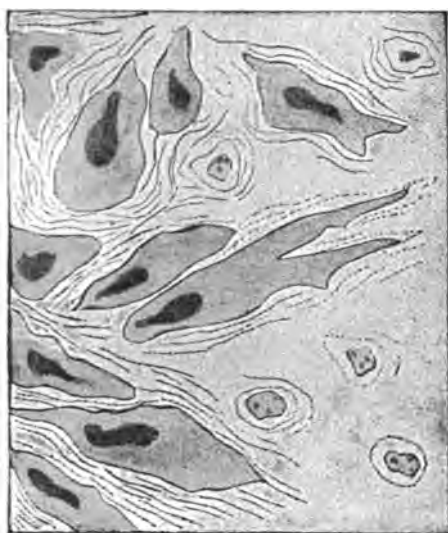


FIG. 1.—Giant Cells (Maurice Cazin).

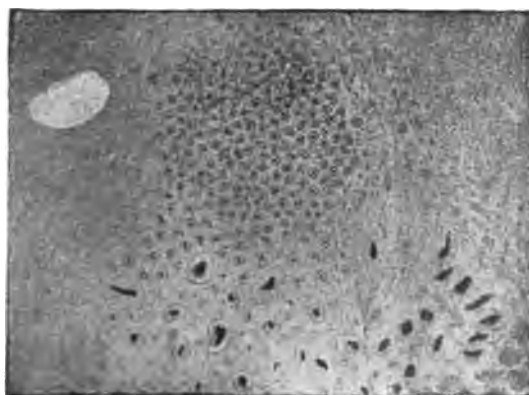


FIG. 2.—Section showing grouped Giant Cells and proliferating Groups of Cells of a Sarcomatous Type in the Neoplastic Elements. Such grouping has been mistaken for pavement epithelium.



This affords a histological explanation of the characteristic and intermittent hæmorrhages, which are a clinical feature of this affection.

Beneath this necrosed zone, near the cavity of the uterus, there is the denser neoplasm, which irregularly invades the deeper and sounder tissues. And further removed from it, at the periphery of the uterus, there is the external bed of normal uterine tissue, of varying thickness, according to the extent to which the disease has progressed. Gottschalk gave the name of *choriodeciduoma malignum* to a variety of the disease in which the affected surface presents a villous appearance, somewhat similar to the villousities of the chorion. Hartmann, Toupet, and others, have reported on these cases. The vegetations are vascular, having each a central vessel surrounded by the connective tissue elements. With their rounded expansions in contact one with another, these vegetations form by their connection a neoplastic tissue, which, when they have arrived at their full period of development, has the appearance of a continuous membrane, having a uniform thickness enclosing a limited number of nodules, without any line of demarcation of cellules. Protoplasmic masses are seen forming secondary vegetations, having a larger number of nodules, and provided at their periphery with amorphous granular projections, which are true points of development.

A vascular cavity is formed after a time with embryonic elements interposed between the vegetations and the vessel, the coat of which is very thin. The authors referred to regard this neoplastic variety as derived from the *hydatiform mole*, considering it as myxoma of the chorionic villi, rather than as a sarcoma of these structures with an embryonic infiltration, as in the case of *deciduoma malignum*. It is in these villous forms of *deciduoma* that the more serious vascular lesions occur, attended by profuse hæmorrhage and venous metastasis. This important histological distinction is thus justified clinically.

Spencer (*Quarterly Journal of Medicine*, July, 1896) quotes

the case of Apfelstedt and Aschoff, as well as of Müller. In the former, secondary growths of hydatidiform mole were found in the labium and paravaginal tissue, and in the case of the latter, a row of cystic tumours. Spencer, regarding the whole clinical and histological features of the disease, looks on it as a malignant affection having an association with, or being consequent upon, pregnancy. Hydatidiform mole has been observed in 45 per cent. of the cases.

Symptomatology.—The most characteristic symptom is severe intermittent hæmorrhage following upon labour or abortion. The time the bleeding appears after the uterus has been emptied varies. It may occur comparatively soon. In a large proportion of cases, the hæmorrhage, having continued for a time, is attended by the discharge of a hydatid mole. Fœtor of the discharge is frequently present. Metrorrhagia and foul-smelling, dirty-coloured watery losses frequently last after the hæmorrhage ceases, or when the uterine cavity has been curetted. Associated with these local signs there is a general cachexia, and a falling off in the health of the patient, who gradually becomes anæmic. On making a local examination, the body of the uterus will be found more or less enlarged, movable or fixed by perimetrial adhesions. In the annexa, if affected, secondary nodules project which have a smooth feel. The cervix may be open, admitting the introduction of a finger, but more frequently it is closed. Bimanual examination gives but little information. By means of laminaria the uterine cavity may be explored, and soft vegetating masses, or possibly ordinary coagula, discovered. Cazin says that what appear coagula are often in reality neoplastic masses into which blood has infiltrated. The facility with which the finger of the explorer may pass through the uterine wall and perforate the uterus has to be remembered. But the crucial test must be applied by a histological examination of portions of tissue removed in exploration from the uterine cavity. I have thus briefly, and without bias, placed the views of the Continental authorities I have mentioned on record. And I append to this *résumé* of

Cazin's thesis, a bibliographical list of the contributions which have appeared on the subject.

Differential Diagnosis.—When we come to the grounds of a distinctive differential diagnosis of the disease, so far as its clinical features are concerned, we find that, save in the history of the case and its etiology, we have not many reliable data. True, a large proportion of the cases recorded—fully half—suffered when comparatively young ; that is, before thirty years of age. Also, the character of the hæmorrhage, and its association with labour or an abortion, may rouse our suspicions, while the appearance of a hydatidiform mole may confirm these. But the other signs and symptoms, and even the hæmorrhage, are common to carcinoma and sarcoma of the uterus, while both of these diseases may occur in connection with the consequences of conception. At the meeting of the Obstetrical Society of London, opinion was much divided on the subject, when Spencer and Rutherford Morison both recorded cases, and Eden combated the view of the deciduous origin of the disease. The hope may be expressed that deciduoma malignum will not become “the fashion.” It would be better to accept no case as such, which is not clearly identified histologically as associated with conception and its products. One good, at least, will result from the recognition of this relationship : it will help to prevent that “masterly inactivity” so often assumed in the face of grave hæmorrhage and persistent discharge from the uterus after abortion and labour. It will give an increased importance to the occurrence of molar pregnancy, and the presence of hydatids in the uterus. It will also have the practical effect of emphasizing the necessity for thorough emptying of the uterus in cases in which this step is indicated in molar pregnancy. On the whole, this new addition to gynæcological nomenclature must tend to greater accuracy in the differentiation and classification of malignant affections of the uterus.

Treatment.—In view of what has been said of the nature and rapidity of the development and spread of the disease

pan-vaginal hysterectomy, with total ablation of the annexa, is the only course to advise.

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ON THE USE OF ANÆSTHESIA IN OBSTETRIC PRACTICE.

By H. BELLAMY GARDNER, M.R.C.S.Eng., L.R.C.P.Lond.

*Assistant Anæsthetist to Charing Cross Hospital, Fellow of the Obstetrical and Gynæcological Societies, Member of the Society of Anæsthetists.**(Continued from p. 190.)*

Not poppy nor mandragora,
Nor all the drowsy syrups of the world
Shall ever medicine thee to such sweet sleep.

Shakespeare.

THE three sections of this article already published deal with the first applications of anæsthesia in midwifery; the safety of the mother and child during obstetric anæsthesia, assured by the routine success of this practice for the past forty-eight years; and lastly, with the properties of the six chief drugs which have been employed to produce it.

The result of these researches is decidedly in favour of the use of chloroform or the A.C.E. mixture for ordinary labours, with a transition to ether inhalation when surgical narcosis is required. Bichloride of methylene was shown to be too expensive and unstable in composition, while amylenes was proved to be a highly dangerous anæsthetic. Bromide of ethyl, of which I have not yet spoken, is declared by Kappeler to be easily decomposed, and it therefore yields an uncertain anæsthesia.¹ Silk, who tried it in many dental operations, found that the heart's action tended to become slower, more feeble, and irregular under its influence, while arterial dilatation, with a consequent fall in blood pressure, accompanied it and enhanced the danger.² Marion Sims also employed it with disastrous effect in a Batty's operation, for his patient died twenty-one

hours subsequently with symptoms of acute gastro-intestinal irritation.³

A careful consideration of the combined use of morphia with chloroform, by injecting $\frac{1}{8}$ – $\frac{1}{4}$ gr. of acetate of morphia hypodermically a quarter of an hour before the administration is begun, forces me to the decision that extra care must be used with the anæsthetic, because the proper signs of chloroform narcosis are apt to be masked by the presence of morphia in the blood. The pupil is likely to be small and immobile, the breathing shallow, liable to become unexpectedly impaired, and the due elimination of chloroform unsatisfactorily restricted; the respiratory mucous tract at the same time loses its reflex irritability—normally a valuable test of the depth of anæsthesia—and after sickness is of more constant occurrence.

Nussbaum started this practice in 1863 in order to prevent pain *after* operations, by injecting morphia *during* anæsthesia.⁴ Rabot, Utterhart and Bernard experimented with the method, but though without doubt the sleep is extremely tranquil, and may be easily prolonged with small doses of chloroform, the deliberate use of morphia appears of questionable advantage, except in alcoholic subjects found to be otherwise unmanageable.

When Resident Officer at the Hospital for Women in Fulham Road, I recall these masked appearances during narcosis with morphia in a patient to whom I administered the A.C.E. mixture for an abdominal section by Dr. William Duncan. A clinical assistant had been examining the woman in the out-patient department when he felt what he thought to be a tumour behind the uterus suddenly collapse between his hands (bimanual palpation). I was called down and found her in great pain, with a small running pulse and cold perspiration; the face was blanched, and fearing internal hæmorrhage from a ruptured cyst or extra-uterine gestation sac, I injected $\frac{1}{4}$ gr. acetate of morphia hypodermically, and had her put to bed. Dr. Duncan was sent for, and arrived within an hour; the

patient by then had rallied a little, and it was decided to open the abdomen in order to remove the cyst. I gave a small quantity of A.C.E. upon Rendle's mask, and rapidly a very tranquil anæsthesia, with extremely quiet breathing, supervened, the lid reflex disappeared at once, the pupil became contracted and fixed, neither swallowing nor cough was present, the muscular system became early relaxed and remained so, while a very few minims of A.C.E. at a time were required to maintain this condition. The respiration was the only guide throughout. Dr. Duncan found a ruptured ovarian cyst behind the uterus (pregnant six weeks), with some hæmorrhage into Douglas' pouch, and by ligature of the pedicle near the left uterine cornu, removed it. The patient slept for many hours, and excepting that she aborted on the fourth day afterwards, made an excellent recovery.

If dangerous symptoms of respiratory embarrassment appear under such conditions, it would be far less possible to obtain relief by artificial respiration, as morphia is non-volatile and without doubt tends ultimately to paralyse the medullary centres.

The addition of $\frac{1}{10}$ th gr. of atropine to a $\frac{1}{4}$ th gr. of morphia may prevent reflex inhibition of the heart, by paralyzing the vagus, and is said to lessen the after sickness.⁶

Morphia and ether in like succession or combination cause, in many cases, a very unsatisfactory accentuation of excitement in the second stage of anæsthesia, and I think its use involves a quite unnecessary risk without any compensating advantage.

A discussion on the value of a dose of 30-60 grs. of chloral hydrate before chloroform inhalation, took place at a meeting of the Paris Société de Chirurgie some fifteen years ago. Dr. Forné said it shortened the excitement stage, and required less chloroform, but Drs. Dolbeau and Demarquay⁷ thought it a dangerously depressing combination. Dr. Playfair, who so strongly advocates the use of chloral in the early stages of labour, apparently regards the subsequent anæsthesia of chloroform as unaffected by it,⁸ except that less of the inhalation is required.

Liebreich's theory that chloral hydrate is broken up into chloroform and formic acid in the presence of the sodium salts of the blood plasma is open to serious objection, owing to recent chemical researches, which have thrown doubt even upon the accuracy of its accepted molecular formula ; it is known to be excreted by the kidneys partly unchanged, and partly as uro-chloral acid.

PART IV.

The Value of Anæsthesia in the First Stage in Certain Cases.

We have now arrived at a point where the advantages of the abrogation of pain in labour may be considered in detail. It has been indicated above that the administration of chloroform is not usually commenced until the complete dilatation of the os uteri has been accomplished ; but the period preceding this may, in certain circumstances, become an extremely painful one, notably in primiparæ, especially when in middle life ; also among the upper classes, in whom all uterine reflexes produce more general disturbance, and pain is rarely so well borne ; again, in patients who are the subject of stenosis of the os uteri from rigidity, spasm, cicatricial contraction, hypertrophic induration, swelling of the cervix from thrombus, fibroid tumours or malignant disease,¹⁰ and in others with old-standing disease of the uterus or the adnexa. Cazeaux recommended anæsthesia for calming agitation in nervous women. Snow would give the chloroform when the patient herself requested it. Charles Kidd considered it useful when diarrhœa or great emotion had brought on labour suddenly,¹¹ in this latter state giving the anæsthetic freely to delay the progress of the parturition.

Barker advised chloroform in the parturient with heart disease, because of its calming influence on the nervous system ; he related an illustrative case in which a small, irregular pulse of 140 became stronger, and was reduced to

96, with very favourable result in mitral regurgitation during the first stage of labour. Its use has been advocated in women suffering from cramps, colic, or vomiting as labour is commencing, and in those with pain in the sciatic areas caused by the pressure of the gravid uterus.¹³

The Method of Administration.

I will not preface the following directions by going so far as Ahlfeld, who instructs us that everyone, including domestic animals, should first be turned out of the room.¹³ Nor is it necessary to agree with Forbes, who stated that with the aid of chloroform we may assure our patients that the mothers of the present day can bring forth their children "lying upon a bed of asphodels, amid Elysian dreams,"¹⁴ but we may surely tell them that in our hands the inhalation is practically quite safe, and that it will, without any doubt, much relieve their suffering. Silence should be observed, and except to give directions or encouragement, no conversation should be held with the patient. We should bear in mind the fact that the patient's bladder may require attention from time to time to guard against over distension,¹⁵ and if the labour is prolonged, intermissions should be allowed occasionally, during which a little alcohol or other liquid nourishment, except milk, may be given internally, to sustain the general metabolism. This little manoeuvre will often stimulate the uterine contractions, and, indeed, one-third of absolute alcohol may be mixed with the chloroform inhaled to produce a like effect.

The Second Stage.

At the beginning of the period of expulsion, when pains are becoming regular, the administrator having an ounce of chloroform in his Junker's bottle (not more than this, because a larger quantity, on tilting of the bottle, may cause the liquid instead of vapour to pass onwards to the

face-piece), and a frame mask (covered with lint for preference) attached to its efferent tube, should stand behind the patient as she lies upon her left side, holding the mask in his left hand, two fingers being beneath her chin, and with it cover the nose and mouth ; this attitude will allow of his occasionally feeling her right facial pulse as it passes over the ramus of the lower jaw, with the index finger of the same hand.

Next, he should time the interval between the pains, and about half a-minute before the contraction is due, telling the patient to close her eyes and breathe freely, should throw a very gentle whiff of chloroform into each *inspiration* by a quarter compression of the bellows to begin with ; he should stop for a breath or so if respiration be held, only introducing chloroform when air is entering and returning *freely* from the lungs ; as the pain approaches she will take more ample inspirations, the bellows may be compressed to half their size each time, and at the acme of the pain the mask may be removed.

It must be pointed out that in very robust or alcoholic subjects scarcely enough vapour can be got into the circulation by these means, and herein lies the advantage of the lint mask I have recommended. A drop bottle of chloroform can be slipped into the waistcoat pocket beforehand, and if more is needed than the Junker yields, half a drachm or so of chloroform can be poured upon the lint in addition to strengthen the entering vapour current.

The one systemic function needing attention is respiration ; *the head should be kept on the side*, because mucus or vomited matter can then flow out of the mouth, and the angle of the jaw or the chin itself can easily be kept elevated to prevent obstruction of the air-way by the base of the tongue falling backwards upon the pharyngeal wall.


The posture of the patient is generally the left lateral one, but when giving an anæsthetic I think the left arm should *not* be drawn behind the back, for this throws the body semi-prone ; my experience shows this often hampers the

expansion of the left or lower lung, and, thereby, introduces an undesirable asphyxial factor under chloroform. In stout people especially the action of the *diaphragm* is less hampered in the lateral than in other recumbent postures, because the weight of the abdominal contents thereby is, to a certain extent, removed from it.

If the method of inhalation *only during the pains* causes excitement (apart from feelings of discomfort, which can be overcome by a little management), a deeper type of narcosis must be produced by more chloroform, and a more continuous use of it; but in doing this it must be borne in view that the after-effects of narcotic inhalations are generally determined as much or more certainly by the total quantity of vapour absorbed as by the depth of narcosis reached at any given moment.

"It is distinctly advisable to increase the dose as the head advances, to such a degree that when the rectal fingers obtain control of the head, the anæsthetic can be pushed to full surgical anæsthesia within a few moments, during which the head can be held immovable. All the forces of expulsion and resistance are then under the control of the accoucheur, and he possesses facilities for the avoidance of laceration of the perinæum which can be obtained in no other way."¹⁶

When surgical narcosis is required for operative interference, the administrator—who should, wherever possible, be a medical man other than the accoucheur (*vide* Dr. Playfair's warning in his chapter on Anæsthesia in Labour)—may now transfer the patient to ether inhalation, by substituting a Clover's inhaler containing $1\frac{1}{2}$ ounces, turned at first to one part of ether; or an Ormsby's cone charged with an ounce, with its air-valve open; before this, however, he should carefully ascertain that there is some lid-reflex present, which will guide him with the ether subsequently. The use of ether will be safer than chloroform, and recovery more rapid, in those surgical procedures which call for the third stage of narcosis, excepting a few requiring complete



relaxation of the uterine wall, as versional delivery, hour-glass contraction of the uterus and removal of adherent placenta; in these chloroform yields more complete flaccidity and had better be adhered to.

The value of chloroform in puerperal convulsions, in peritonitis, in dysmenorrhœa and in uterine diagnosis generally, cannot be dealt with in this article; but the undoubted greater safety of anæsthesia in obstetric conditions, and in obstetric degree, should place it at the disposal of almost every patient but the one who labours under great respiratory difficulty from pulmonary disease.

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*CLINICAL CASES.*NOTES OF THREE CASES OF FIBROID TUMOURS OF THE
UTERUS, COMPLICATED BY PREGNANCY AND TREATED
BY OPERATION.

By RUTHERFORD MORISON, M.B., F.R.C.S.


Case 1.—L. T., aged 33, a patient of Dr. Skrimshire (Morpeth), married for five months, complained that for the last two months her abdomen had been swelling and that she had bad attacks of pain in it. This she thought was due to pregnancy, for menstruation, previously regular, had been missed for two months. Dr. Skrimshire was called in on account of the pain and discovered a tumour. The pain was worse at night, and prevented her from sleeping. She vomited occasionally.

Her previous health had always been good. Menstruation commenced when she was between 14 and 15 years old, and was always regular and free; for the first day she was in much pain. Four years ago she had some difficulty in micturition. There was a frequent desire to micturate, worse at nights, and only a small quantity of urine could be voided at a time. After a few weeks of medicinal treatment this passed off.

There was nothing of interest in her family history.

She looked a strong woman, but had lost flesh, and grown pale since her illness commenced. All her organs, with the exceptions noted, appeared to be sound.

On examination of her abdomen by inspection, it was noticed to be prominent in two situations, the hypogastrium



and the epigastrium, and between the two prominences there was a marked transverse sulcus. The upper swelling was very tender. It felt soft and elastic, and had well-defined edges. It moved very little, if at all, with respiration, and felt fixed when manipulated. The lower swelling felt like a cyst, the size of a five months' pregnant uterus. It could be moved independently of the upper swelling.

Per vaginam.—All the usual signs of pregnancy were found.

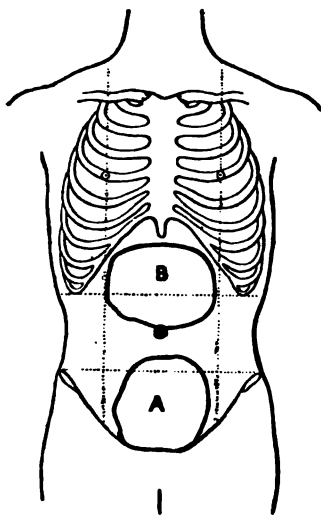


FIG. 1.—(A) Pregnant uterus. (B) Fibroid tumour.


The breasts were enlarged, looked like those of pregnancy, and contained colostrum.

Operation, June 18, 1895.—The abdomen was opened in the middle line, from the epigastrium to the umbilicus, and the omentum was seen to be curled up and adherent to the front of the upper tumour. The incision was prolonged downwards to midway between the umbilicus and pubis. The umbilicus was excised and the tumour and uterus were

turned out of the abdomen. The tumour was a sub-peritoneal fibroid, the size of a large football, with a pedicle the thickness of my wrist. It was attached to the right upper cornu of the uterus, and as the pedicle was of some length an attempt to remove the tumour without interfering with the uterus, was considered reasonable. The adherent omentum and transverse colon were sponged off the front of the tumour, and the pedicle was caught in large forceps. It tore and bled profusely, and was so soft and friable that no ligature would hold. The hæmorrhage was arrested by sponge pressure, whilst the infundibulo-pelvic ligaments on either side were divided between a ligature outside and forceps on the uterine portion. The broad ligaments, with immense veins in them, were then ligatured and divided as far as the lower portion of the uterus, and this was surrounded by an elastic ligature. The pregnant uterus and the tumour were cut off above the ligature, and a Keith's clamp applied to the stump, which was trimmed down. The adherent omentum, which had been lying outside covered by sponges, was still bleeding so freely that it was ligatured in portions and cut away. The abdominal wound was closed carefully by silk sutures, except close to the pedicle, where a deep layer of catgut sutures was used to draw the peritoneum round the stump, and a superficial layer of fishing-gut sutures brought the divided skin surfaces into apposition.

The patient lost a good deal of blood during the operation, but was put to bed in good condition. The greater part of the blood was lost during the time that the attempt was being made to save the uterus.

Pathology.—The pregnant uterus contained a normal five months' foetus. The tumour was of a tallow colour, with rough surfaces where adhesions had been separated, and immediately under this capsule and shining through, were a number of large thrombosed veins. On section there were hæmorrhages in all stages throughout the tumour. Microscopically it was a soft fibroma.



After-progress.—The catheter was passed every three hours for the first five days. Subsequently the urine was passed naturally. The wound was dressed on the second day and again on the eighth day. On the twelfth day the clamp was cut away, and the sutures were removed. During the first ten days the highest temperature was 100°, and that only on the two evenings immediately succeeding the operation. The highest pulse recorded was also 100 on the same occasions. During the third week slight suppuration round the stump was accompanied by a moderate nocturnal rise in temperature, which lasted for a week, but the general condition of the patient was little disturbed by it. In six weeks the wound was entirely healed.

The patient is at present in good health, and there is no tendency to hernia of the cicatrix.

Case 2.—A. R., aged 41, a patient of Dr. Mackay, Berwick-on-Tweed.

History.—Her first and only child was born ten years ago, and she has never felt quite right since. The labour was not more than usually difficult, but convalescence was slow. Till two years ago the sensations experienced were merely those of discomfort. Two years ago she began to lose more at the menstrual periods than usual, and exercise was apt to bring on hæmorrhage. Dysuria, a feeling of fulness in the lower part of the bowels and swelling of the legs were also complained of, and she was advised to lie upon the sofa for six weeks, after which the symptoms were relieved.

Menstruation last occurred on October 17, 1895 (3½ months ago). About six weeks ago, she noticed that a railway journey or driving shook something inside, and caused pains in the bowels. The abdominal swelling came suddenly, within twenty-four hours, six weeks ago (of this there is good evidence, for a new dinner dress worn comfortably one night could not be made to meet the next). The enlargement has continued to increase steadily since then. There have been no symptoms of pregnancy. The patient was an active healthy-looking and intelligent woman, with no evident disease except in her abdomen.

The abdomen was swollen and prominent in front, and the prominence was due to the presence of a large, hard, sharply-defined tumour. It lay over towards the left side, but reached to the right beyond the middle line. Its upper limit in the middle line was one-third of the distance between the ensiform cartilage and the umbilicus. Below, it extended to two inches above the pubis. On the left side below it reached the ant. sup. spine of the ilium. Above, it extended into the splenic region. On the right, the tumour reached to the right linea semilunaris. It was movable from side to side, and could be pushed from below upwards, but was very tender when handled.

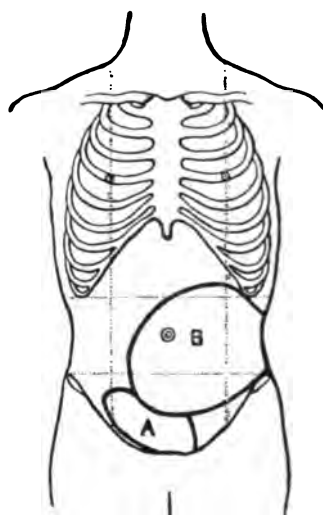


FIG. 2.—(A) Pregnant uterus. (B) Fibroid tumour.

Per Vaginam.—The cervix was high up and soft. The os patulous, admitted tip of fore-finger. The movements of the tumour were not propagated to the cervix.

Bimanually, the fundus of the uterus could be felt pushed over to the right, and reaching midway between the pelvis and umbilicus. The tumour lay to the front and left of it. No definite separation could be felt between the two.

The breasts were enlarged and had every sign of pregnancy.

Operation, February 6, 1896.—The umbilicus was excised and the abdomen opened above and below it. The tumour was seen to be a fibroid, and the incision was enlarged sufficiently to turn the tumour and the uterus out of the abdomen. It was growing from the left cornu and left border of a three months' pregnant uterus, which it had rotated (the tumour lying in front), so that the left appendages and broad ligament lay behind the pubis, the right ovary and tube high up on the back and right side of the pelvis. The infundibulo-pelvic ligaments were first tied, then clamped on the uterine side of the ligatures, and cut between, and the remainder of the broad ligament down to the lower part of the uterus was similarly dealt with. A thick silk ligature was tied round the isolated lower zone of the uterus, and Keith's clamp fixed in the groove of the ligature. The uterus and its appendages with the tumour were cut off above the clamp. The stump was trimmed, hollowed out, dried, swabbed with pure carbolic acid, and filled with boracic acid powder. The abdominal wound was carefully closed with two tiers of catgut sutures. Very little blood was lost, and the patient was put to bed in excellent condition.

Pathology—The uterus held a three months' normal foetus. The tumour was an oedematous myoma, the size of a large football.

After-progress.—From the first the recovery of the patient was uneventful. She micturated unaided, and had little to complain of. The dressing was changed for the first time on the twelfth day. The sutures were absorbed, the wound healed, and the stump quite dry. The clamp was removed, and the dried stump cut away. A sinus remained at the bottom part of the wound for a few weeks after her return home, but eventually healed. The scar is now strong, and the patient in good health.

Case 3.—Mrs. R., aged 46, a patient of Dr. Smith, Ryton. About six and a-half years ago, she felt pain in the abdo-

men, increased by walking, and discovered a hard swelling down below about the size of an apple, which seemed to be fixed. Six years ago, five months after her marriage, she had a bleeding which lasted four days. The bleeding was very severe, and large clots came away. It occurred just after a menstrual period, and two months later she was sent to see me, when I found that she was pregnant about two months, and had a small uterine fibroid—waiting was advised. A fortnight before the full term of pregnancy she had two fits of an epileptic character, and was very ill. (Dr. Smith found albumen in her urine at this time.) The baby was born at term, but was dead. Her convalescence was slow. When she got about again, the tumour was felt in the left side, flattened out and of the shape and size of an inverted saucer.

Two months after the baby was born menstruation started. It was normal in quantity and quality. About a year after the baby was born, the tumour began to get larger and occasional pain was felt in it. Up to this year the tumour had slowly but steadily increased in size and caused more inconvenience. Lately menstruation had not been regular. A week after New Year, normal menstruation occurred; then for six weeks nothing appeared, but since there has been a small quantity daily of odourless, coloured discharge. Three weeks ago a severe flooding came on, but lasted only a few hours. Micturition had increased in frequency, the tumour had got much larger and there had been frequent sickness since the New Year.

Her health up to six years ago had been excellent. There was nothing in her family history worthy of mention. She was a healthy strong-looking woman, and all her organs appeared to be sound. Both breasts were a little enlarged, and firm, and had a well marked areola round the nipple. Some colostrum could be expressed from each. (Since the baby was born, the breasts have been enlarged and irritable).

The abdomen was enlarged and prominent in front, especially below the umbilicus. The swelling was due to

a hard tumour extending from the pelvis to above the umbilicus. On the left side it reached to the iliac crest, on the right to two inches from the anterior superior iliac spine. The tumour was rounded in front, and dipped down into the pelvis. The right margin was well defined, the left sunk into the flank. The upper border extended right across the abdomen about two inches above the umbilicus. It was irregular and had large nodules on it. A soft elastic nodule, the size of an orange, was felt in the right border. The left side was very tender. The whole tumour was fairly movable from side to side, but could not be pushed upwards out of the pelvis.

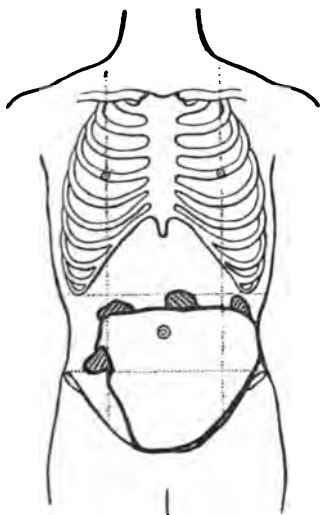


FIG. 3.—Showing nodules on tumour.


Per vaginam.—The cervix was normal and soft. There was a hard rounded tumour in the anterior fornix, continuous with the abdominal one. It extended laterally to, but more towards the left than the right side. The tumour was not immovably fixed in the pelvis.

Operation, March 18, 1896.—An incision was made from

midway between the ensiform cartilage and the umbilicus, which was excised, to the pelvis, the abdomen was opened and the tumour turned out. The broad ligaments on each side were ligatured outside of the ovaries and down to the uterus. The vesico-uterine fold of peritoneum was divided and separated, and the peritoneum posteriorly was also stripped from the uterus. The raw surface, including the uterine arteries, was surrounded by an elastic ligature, and the tumour, and the pregnant uterus were cut off; up to this stage no blood had been lost. The abdominal cavity was now packed with sponges, and the patient placed in the lithotomy posture. The cervix was removed through the vagina by anteverting the stumps through an incision in the vagina anterior to the cervix. In making this incision, the enlarged vaginal arteries bled furiously, and were controlled by leaving hæmostatic forceps hanging on them. The lower portions of the broad ligaments, containing the uterine arteries, were also clamped with hæmostatic forceps, which were left attached to them. Each portion of the remaining vaginal wall was also caught in forceps before division, so that when the cervix was finally removed, twelve pairs of forceps were left in the vagina. In the centre of them a thick strip of iodoform gauze was left, the upper end of which reached the peritoneal cavity; the lower end projected out of the vulva. During the second stage of the operation the patient lost a serious quantity of blood. The operation was completed by removing the sponges from the abdomen, and suturing the parietal wound. The patient was somewhat collapsed when put to bed, but soon rallied.

Pathology.—The enlarged uterus, containing a foetus of nearly three months, was surrounded by a large multinodular fibroid tumour, only the anterior portion of the uterine wall being free.

After-progress.—At the end of forty-eight hours the hæmostatic forceps were removed. In seventy-two hours the gauze was taken away. At the end of ten days the wound was dressed for the first time, and found to be healed



throughout by first intention. The stitches were removed. Sickness was troublesome for the first four days, but appeared to be greatly of nervous origin, for it ceased after an allowance of beer and biscuits (for which the patient had a great craving), and was attended by no sign of anything wrong. Except for this, her recovery was uneventful. She is now in excellent health and has a sound scar.

Remarks.—The only question raised by these cases was the form of operation to be performed. That an operation was necessary, and that hysterectomy was the only method likely to succeed, will be granted by any one who reads the notes. In an ordinary case of uterine tumour I am strongly in favour of an intra-peritoneal treatment of the stump, or of total hysterectomy, but in such cases as these, where the uterine and vaginal vessels are of large size, I am disposed to the view that in the majority, an extra-peritoneal treatment of the stump is the best. The form of total extirpation, fashionable just now, and in which the whole uterus is removed from above, is more difficult and more dangerous than the operation I performed in Case (3), for even after the uterine arteries are tied on either side, the dilated vaginal branches bleed freely when they are cut, and are difficult to catch and tie. I assisted a skilful surgeon with this operation in a case of pregnancy and fibroids a few months ago, and would not care to see another of the same sort. Even in my Case (3), the bleeding, though completely under control, was more profuse than is compatible with the greatest success. Baers' operation, though successful in ordinary cases, sometimes in them causes trouble, as I have myself seen, by hæmorrhage from the stump after the uterine arteries are tied. I would consequently not be disposed to try it when the blood supply was so materially increased as in the cases I have reported, notwithstanding that it has been successfully performed by several operators. Too much has been made of the risks and drawbacks of the extra-peritoneal method. It is an excellent one to fall back upon, and can be relied on

as the best when the results of other methods are likely to be uncertain.

THREE CASES OF ECTOPIC GESTATION. By RUTHERFORD MORISON, M.B., F.R.C.S., and LIONEL CALTHROP, M.B., B.S., M.R.C.S.

Case 1.—Tubal Gestation diagnosed and removed before Rupture.—The patient, aged 30, was married six and a-half years ago. Five months after her marriage she slipped down stairs, and felt that she had strained something internally. Her next menstrual period was painful. She had previously menstruated without pain; but from the time of her accident menstruation has always been painful, though regular. She has never had any children or miscarriages.

In the first week of December, 1895, she menstruated as usual, but she missed the period due early in January of this year. *Previous to this, menstruation had always been regular.*

On January 21 she was seized with severe pain in the lower abdomen, which doubled her up, and caused her to vomit. Soon after this attack of pain, vaginal hæmorrhage occurred and lasted some days. After an interval of a few days it recurred for a short time, and then ceased until February 7, when it recommenced and continued more or less until the date of the operation.

About February 20 some "skin" came away with the discharge.

Since January 21 she has had a good many attacks of pain accompanied by vomiting, and since February 7 the pain has been so bad that she has been confined to her bed.

The patient was seen by Mr. Morison with Dr. Edith Joel on February 27 (two months after last normal menstrual period). Nothing could be felt by abdominal palpation. On vaginal examination the uterus was found



FIG. 1
Anterior Surface. Left Fallopian Tube and Ovary.

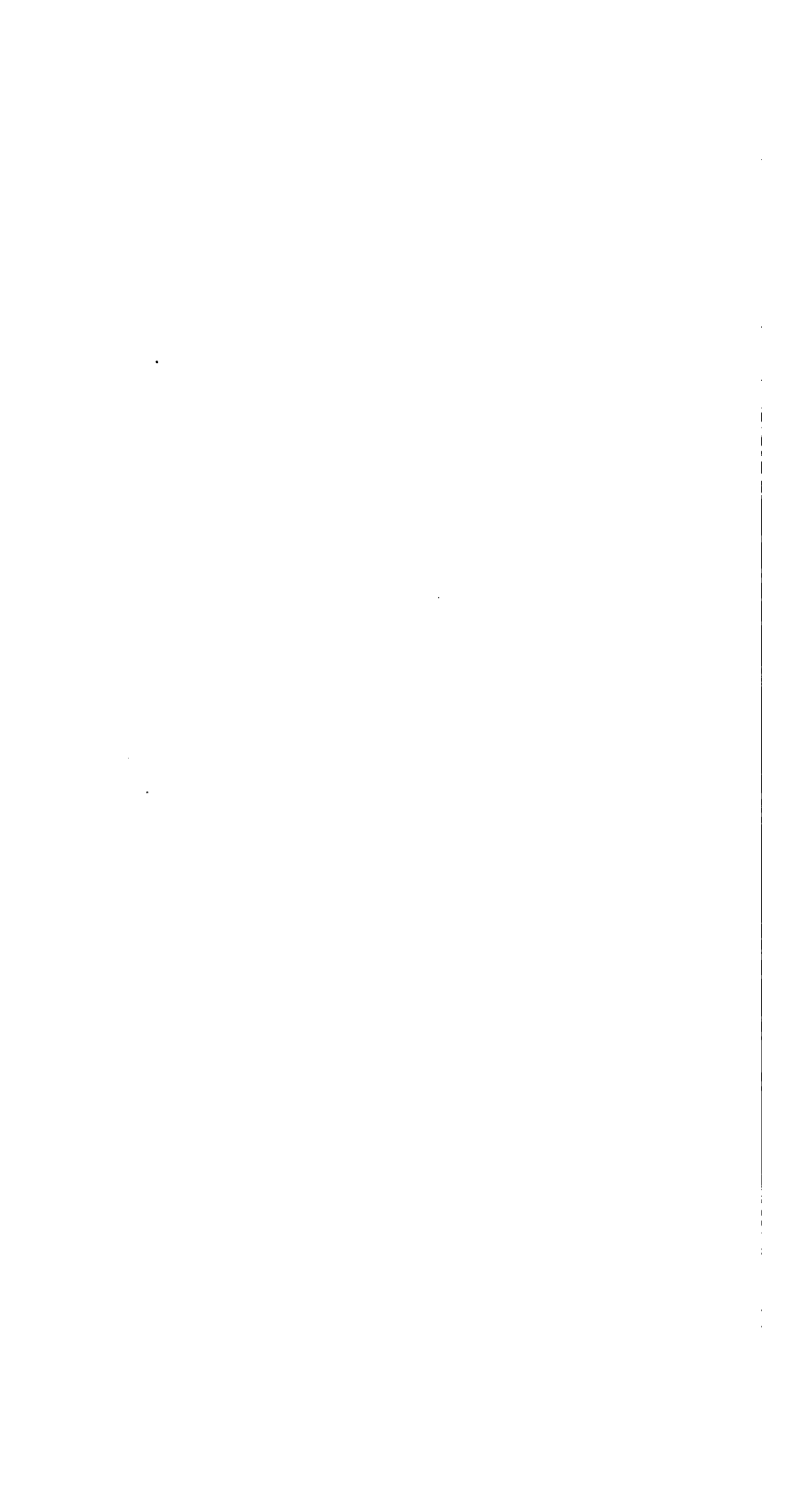




FIG. 2
Posterior Surface. Left Fallopian Tube and Ovary.

to be enlarged, distinct from, and pushed forwards by a very tender soft swelling, which occupied Douglas' pouch and bulged the posterior vaginal wall. The uterine arteries beat forcibly. The cervix uteri was soft. The uterine sound was not passed.

The clinical history associated with the physical signs described made the diagnosis of an unruptured ectopic gestation sufficiently safe. Immediate operation for its removal was advised.

The operation was performed on February 28, 1896, by Mr. Morison. On opening the abdomen, the swelling occupying Douglas' pouch was found to be the left Fallopian tube greatly distended and adherent. The uterus was lying in front. The adhesions were carefully separated, and the Fallopian tube with its contents and the corresponding ovary were brought outside of the abdominal wound, no rupture having taken place. The pedicle was then trans-fixed and tied in the usual way with a silk ligature, and the Fallopian tube and ovary were removed. As the Fallopian tube was cut through, some treacly blood escaped; the end of it was, therefore, tied in order to preserve the contents intact as far as possible.

The right Fallopian tube and ovary were next examined. The tube was found to be thickened and distended to about three times its normal size as well as adherent to the surrounding structures, and was removed in the same way with the corresponding ovary. There was no blood in the peritoneal cavity, nor did any fluid escape into it; the abdomen, therefore, was closed without drainage.

The patient made an uninterrupted recovery.

Examination of the Specimen.—The left Fallopian tube was reddish in appearance, dark purple towards its fimbriated extremity, and bent at right angles, as shown in the accompanying drawings (figs. 1 and 2). Dilated vessels could be seen coursing over the most distended portion. The tube measured about five inches in length and two and a-half inches in breadth.

On opening the tube from the uterine end towards the fimbriated extremity, there was found, first, fluid blood dark in colour and thick, exactly similar in appearance to that which the patient had been passing *per vaginam*, and occupying a dilated portion of the tube (*vide* fig. 3). Further outwards in a more distended portion of the tube was found an irregular-shaped blood clot and some more liquid blood. Beyond this again, occupying the most dilated part of the tube, was a foetus $\frac{3}{4}$ in. in length, floating in an amnion sac containing clear amniotic fluid. The foetus was attached by a short and fan-shaped umbilical cord. There was no blood extravasated into the amniotic cavity. The interior of the amniotic membrane was smooth, not mammillated, and the membrane itself, though very thin, could be peeled off the chorion; no blood was found extravasated between the amnion and the chorion (subchorionic space, Bland Sutton).

The chorion with its villi was very well marked. Hæmorrhages had occurred in its substance, and also between it and the wall of the Fallopian tube. There was no evidence of hæmorrhage having taken place anywhere else.

The Fallopian tube had become so thin in parts by stretching of its substance and slight tearing of its outer coat, owing to the tension within, that it was almost transparent. The fimbriated extremity was closed.

The foetus (fig. 7), was very small in comparison with the size of the amnion cavity, and only measured $\frac{3}{4}$ in. in length; it consisted of one head and two bodies joined anteriorly.

The right Fallopian tube (figs. 4 and 5) was distended to three times its natural size, and twisted back upon itself and bound down in this position. It contained blood and epithelial *débris*.

Both ovaries were healthy. The *corpus luteum* of pregnancy was not found in the left ovary as was expected, but in the most dependent part of the right ovary, as shown in fig. 6. It was $\frac{1}{8}$ in. in its longest diameter.



FIG. 3.
Left Fallopian Tube Laid Open.





FIG. 4.—Anterior Surface.
Right Fallopian Tube and Ovary.



FIG. 5.—Posterior Surface.
Right Fallopian Tube and Ovary.



Corpus Luteum,
 $\frac{1}{16}$ inch longest diameter.

FIG. 6.
Right Ovary Laid Open.
Showing Corpus Luteum of
Pregnancy.



Anterior Surface.
A



Lateral Surface.
B



Posterior Surface.
C

Length of Fœtus, $\frac{1}{2}$ inch.
Breadth of Head, $\frac{1}{8}$ "
Breadth of Body, $\frac{1}{4}$ "

There are many interesting features about this case.

(1) There are very few cases recorded, and these only within the last five or six years, in which a tubal gestation has been both diagnosed and successfully removed before rupture.

(2) The length of the interval which elapsed between the first attack of severe abdominal pain which occurred on January 21, and the operation on February 28, during which no rupture took place. That rupture did not take place earlier appeared on an examination of the specimen to be due to (i.) the fact that the hæmorrhage did not take place either into the amniotic cavity or into the potential space between the amnion and chorion, but into the meshes of the chorion, chiefly near its attachment to the wall of the Fallopian tube where it could more easily escape; (ii.) that while the ovum occupied the outer extremity of the Fallopian tube, the inner or uterine end was left free and open, so allowing blood to escape out of the tube sufficiently fast to prevent sudden and dangerous increase of tension. There were, however, such evident signs of the outer covering of the tube having partially given way before the distending force of the growing ovum, if not of the hæmorrhage, that there can be no doubt that rupture would have taken place very soon had the operation been delayed.

(3) It is also interesting to find a foetal monstrosity associated with such a pathological condition.

(4 and lastly) That the *corpus luteum* of pregnancy was not in the corresponding ovary, but in the ovary of the side opposite to the tubal pregnancy.

Case 2.—Ectopic Gestation diagnosed before Rupture. Rupture into the General Peritoneal Cavity during the night preceding operation.—F. M. B., aged 30, a patient of Dr. Buttercase, Forest Hall, complained of pain coming on at intervals in the lower part of the bowels. The pain was first felt three weeks ago. It came on every five or six days, and was so severe as to cause vomiting or a fainting fit. When the pain was worst it resembled the pains of

labour. Menstruation occurred normally and at the proper time, five weeks previously. A week after the normal period some hæmorrhage occurred, and this has continued more or less up to the present time.

The patient had been married six years, and has two children, the eldest being 5 years and the youngest 3 years of age. She has had no miscarriages and no menstrual irregularity with the exception noted.

I (Morison) saw her with Dr. Buttercase on March 30, 1896, because he thought she was suffering from an ectopic gestation.

The patient was a thin and pale but cheerful woman, naturally delicate. Her breasts were enlarged and presented all the appearances of pregnancy; colostrum could be squeezed from them.

On examining the abdomen, a tender indefinite small swelling could be felt in the left iliac fossa. The middle line was slightly pigmented. *Per vaginam*, os patulous. Body of uterus enlarged and pushed over to the right by a tender, elastic, rounded swelling on the left of it. The swelling bulged downwards the left fornix. The uterine artery could be distinctly felt pulsating over it. The swelling was the size of a large orange. It felt doughy and as if adherent to the back of the broad ligament; the uterus could be moved independently of it. The right ovary and tube could not be felt.

My diagnosis agreed with Dr. Buttercase's, and we both urged immediate operation. The patient was consequently sent in to Newcastle on the same day to be prepared for operation. On April 1 I examined her again and found the conditions unaltered.

Operation by Mr. Morison, April 2, 1896.—The abdomen was opened below the umbilicus. Before incising the peritoneum, it was noticed to bulge into the wound and to be dark blue in colour. On completing the incision blood gushed out. The intestines and omentum were blood stained; a quantity of blood, fluid and clotted, was present

in both flanks and in the pelvis. The left tube was drawn forward, ligatured and removed; the abdomen flushed out, dried and closed. The right ovary and tube were normal and were not interfered with. In all there was, as nearly as could be guessed at least a quart of blood in the belly. (The rupture had occasioned no symptoms, and the nurse in charge of the patient had noticed no change in her appearance. The rupture probably took place in the early morning in consequence of the enema and cleansing preparatory to operation.)

The structures removed consisted of an apparently healthy ovary and a tube like a big sausage. Close to its fimbriated end, which was occluded, there was a round opening the size of a threepenny piece, through which a blood clot protruded. The tube was also blocked at its uterine end. On opening the tube an apoplectic ovum the size of a bantam's egg was found in the dilated end under the rupture.

A small portion was sent to the Clinical Research Association, who returned the following report: "This specimen shows a few typical chorionic villi embedded in a large quantity of blood clot."

After-progress was uneventful, the wound healing by first intention.

Case 3.—Ectopic Gestation. Rupture into General Peritoneal Cavity, with Subsequent Limitation of Extravasation by Adhesions.—E. O., aged 38, patient of Dr. Dickie (Morpeth) and Dr. Drummond, at the end of last January (two and a half months ago) first felt slight pain in lower part of bowels, accompanied by vomiting and pain in the stomach. From that time the pain gradually increased until ten days ago, since when it has been somewhat better. The vomiting has throughout been troublesome, but was worse during the paroxysms of pain. The last normal period occurred at new year. Early in February a coffee-coloured discharge commenced, and has continued less or more since. Mic-

turition has been frequent since the illness commenced, and latterly painful as well.

The patient has been married seventeen years, and had three children, and one miscarriage thirteen years ago. She has had no children since the miscarriage. There is nothing in her family history bearing upon her condition.

She was sent to me with a diagnosis of ectopic gestation on April 7, 1896, when she looked very ill. Her skin was yellow as if jaundiced, but there was no staining of the conjunctivæ, though the urine was dark and bilious. Her appetite was poor, tongue dirty, and bowels constipated. Her temperature was elevated (101° at nights). She now weighed 8 stones. Before her illness her weight was $10\frac{1}{2}$ stones.

There was no discoverable disease anywhere except in the abdomen. The areola round the nipple was deeply pigmented, and colostrum could be squeezed from either breast. The abdomen was swollen below the umbilicus. The swelling was due to a firm, elastic, rounded, fixed, tender tumour which filled the hypogastrium and reached upwards as far as the umbilicus. The swelling was nowhere quite dull on percussion. No sounds were audible in it.

Per vaginam.—The cervix, pushed to the right, was soft; the os (patulous) admitted tip of first finger. The left side of the vaginal roof was bulged downwards by a thick-walled, fixed and cystic swelling, which also filled and obliterated the anterior and posterior fornix. The body of the uterus was pushed to the right, and was separate from the cystic swelling. Distinct enlargement, with pulsation of the left uterine artery was felt.

Operation by Mr. Morison, April 9, 1896.—The abdomen was opened from umbilicus to pubes. Omentum and intestine covered the swelling in front, and were adherent to it. The intestines and omentum were blood stained. The incision was prolonged above the umbilicus, which was excised. After tearing through the omentum, a large quantity of blood clot was removed from the pelvis. In Douglas'

pouch, and to the left side, an entire amniotic sac with a foetus in it was felt. The whole sac was about the size of a foetal head at term. The sac ruptured during extraction, but the remains of it, along with the foetus and placenta and a portion of the broad ligament, were drawn forward and excised after ligature of the broad ligament. The foetus (a four-month one) moved for several minutes after its extraction. The uterus lay to the right side. The ovaries and tubes were buried in adhesions and were not seen. The oozing surfaces were packed with gauze, and a glass drainage tube left in Douglas' pouch. Both tube and gauze were brought out through the lower end of the abdominal incision. Abdominal wound closed with silk.

Convalescence was slow, though the patient was able to go home in a month.

REMARKS.

Diagnosis.—The earliest symptom of ectopic gestation is usually paroxysmal pain ; sometimes, however, hæmorrhage takes place first, as in Case 2 ; a discharge of "skins" may follow. The case is liable at this stage to be mistaken for a miscarriage. Paroxysmal pain and hæmorrhage continue to recur in varying degree, up to the time when in the natural course rupture takes place. Rupture of the tube may, however, be considerably delayed by the escape of the blood from the uterine end of the tube as in Case 1, or hastened by closure of the tube at both ends as in Case 2.

The signs of pregnancy may be present, such as milk in the breasts, pigmentation of the skin, &c.

With regard to the physical signs, a tumour can generally be felt either by abdominal palpation or vaginal examination in the pelvis separate from the uterus.

Pulsation of the uterine artery is not pathognomonic of pregnancy, for it occurs, as Dr. Granville Bantock has pointed out, in fibroids. We have also frequently found marked pulsation of the uterine arteries in cases of pyosalpinx, from which the differential diagnosis is hardest.

Early diagnosis of this condition is urgently necessary, and can only be made by careful enquiry into symptoms in conjunction with physical examination of the pelvic contents. But where a woman gives a history either of sterility, or at all events a long interval since last pregnancy and present illness, of a sudden cessation of previously regular menstruation, coupled with paroxysmal pain and vaginal hæmorrhage with or without the passage of "skins," and on vaginal examination a tumour separate from the uterus is found, we may with almost positive certainty diagnose the presence of an ectopic gestation.

The physical signs in such instances as Case 3 resemble very closely those of an inflamed and adherent ovarian cyst, and unless the history and other signs of pregnancy are sufficiently suggestive to guide, a correct diagnosis is impossible, for fluid blood confined by walls of inflamed adherent intestine and omentum yields all the evidences of an inflamed adherent cyst.

REVIEWS.

MANUAL OF MIDWIFERY FOR THE USE OF STUDENTS AND PRACTITIONERS. By W. E. FOTHERGILL, M.A., B.Sc., M.B., C.M.

This book is an admirably arranged and lucid exposition of the principles and practice of obstetrics. No better work of its size exists in any country.

Dr. Fothergill is an Edinburgh man, and it is therefore not surprising that he has given prominence to some of the important contributions to obstetrical science, which have been made by the Edinburgh School during recent years. He has, however, gone beyond the limits of his Alma Mater, and has introduced into his book the results of valuable work carried out by investigators elsewhere.

The chapters entitled, "Functions of the Female Reproductive Organs," and "Development of the Early Ovum," may be particularly referred to as clear and concise statements of the present state of our knowledge on these subjects. In dealing with practical matters, he is as successful as in the exposition of the scientific aspect of the subject. The chapter describing the forceps, for instance, is most readable and instructive. After mastering it, it is difficult to understand how anyone could have any doubts as to the great superiority of the axis-traction forceps over all other forms.

It is a pity that Stratz's section of the pelvis in the early puerperium has been given as an illustration. It represents an abnormal condition of the parts, the pelvis being contracted.

The printing of the book has been successfully carried out, though there are several typographical errors. The arrangement of the type is such, that reading can be carried on with great ease. Junior students should find Dr. Fothergill's book of great assistance to them.

J. C. W.

DIE WEIBLICHEN GESCHLECHTSORGANE. Von Dr. Med. **WILHELM NAGEL**, Privatdocent an der Königl. Friedrich Wilhelms Universität, erster Assistent der geburtshelf, gynäkolog. Klinik der Charité zu Berlin.

This book forms part of a large and important work on human anatomy, edited by Professor Bardeleben.

The name of Dr. Wilhelm Nagel is a sufficient guarantee of thoroughness in any undertaking with which he may be connected. In all his past writings, one has been glad to note the absence of any unpleasant local or national bias. They evidence a liberal and cultured mind in the author, and one which is capable of studying in a sympathetic spirit the reputable works produced beyond the immediate confines of his own great school.

Dr. Nagel has amply demonstrated his fitness for taking an authoritative position among those who have made a study of the female genitals. He has worked for several years with Professor Gusserow in the Gynæcological Department of the Charité Hospital in Berlin, and also with Professor Waldeyer in his Anatomical Institute. Moreover, he has made special studies in Paris, London, Edinburgh, and Bristol.

He has considered his subject under the following heads :—

- (1) The position and relationships of the pelvic contents.
- (2) The various structures in the pelvic floor.
- (3) Blood-vessels, lymphatics, and nerves.
- (4) The individual organs, *e.g.*, ovary, epoophoron, fallopian tube, uterus, vagina, external genitals.

(5) The mammæ.

In regard to the uterus, the author points out the variations which are found in perfectly healthy women as regards the size, shape, position, and relationships. These he relates to conditions occurring in early embryonic life. There can be no doubt that retroversion of the organ in the adult is to be considered merely as a peculiarity of development, and not as a diseased state.

In describing the ovary, he states that it is the essential distinguishing feature of the female sex. He is of the opinion that no case of true hermaphroditism has been demonstrated. Heppner's statements cannot any longer be held as correct. The very early differentiation of the germ-epithelium to form the male or female sexual gland is in some unknown way associated with the non-tendency to a true hermaphroditic formation. Quite different is the condition of things in the rest of the genital organs, where, in both males and females, characters are not unfrequently found belonging to the other sex.

In his description of the tube he is of opinion that the fimbriæ play a passive part in the reception of the ovum. There is no proof that the fimbriæ embrace the ovary during menstruation as was taught by Farre, Pauck and others. The conditions figured by them were produced by inflammation. Neither can Rouget's supposition be upheld, viz., that by contraction of the muscle in the suspensory ligament of the ovary and in the ovarian fimbria the end of the tube is brought close to the ovary.

Probably the currents set up in the peritoneal serum by the movements of the cilia of the epithelium lining the tube are the cause of the attraction of the ova to the tube-lumen.

This view is strengthened by the experiments of von Ott, Penner, and Lade, who found that foreign bodies of small size injected into the peritoneal cavity were drawn into the tube and carried into the uterus and vagina.

Nagel also believes that many of the ova which escape into the peritoneal cavity never reach the tube.

His *résumé* of the various methods by which the ovum travels in different groups of animals is very interesting.

As regards the structure of the outer end of the tube, he shows that it is, in the lower vertebrates, non-fimbriated and possessing only a slit-like opening. In the Sauropsida and in the lower mammals it has a funnel-shaped opening. Fimbriæ appear first among the higher mammals. In certain of those which live in the sea, no fimbriæ are found.

In connection with his description of the uterus is found a valuable summary of the different conditions of uterus and vagina found in the animal kingdom.

Every section of the book is a good piece of work. The volume will be a welcome addition to the library of the anatomist and gynæcologist.

J. C. W.

**INTERNATIONAL CONGRESS OF OBSTETRICS AND
GYNÆCOLOGY.**

THIS Congress met at Geneva during the first week of September, and was a great success in every way. The Swiss medical profession took the matter warmly in hand, and as a result of the labours of an energetic executive committee, of which the President (Dr. Reverdin), Dr. Bétrix, Dr. Cordes and Dr. Bourcart were the more conspicuous members, everything was arranged in a most careful, systematic and hospitable manner. Many social functions were included in the week's programme, among which may be especially noted the entertainment given by the Federal Council at the Palais Eynard, the delightful whole-day tour on the lake, and the luncheon at the beautifully situated hydropathic establishment—Beau Séjour at Champel. Charming weather assisted to doubly secure the success of all these entertainments.

The Congress was attended by distinguished specialists from all the principal countries of the world, including Japan. The British Gynæcological Society was well represented by the Hon. President (Dr. Robert Barnes), Drs. Bantock, F. Barnes, Schacht and Travers (London), Prof. Simpson (Edinburgh), Drs. Byers and Macan (Belfast), Dr. Japp Sinclair (Manchester) and Dr. Dolan (Halifax). Only four other Englishmen were present, viz., Dr. Herman, Mr. Alban Doran and Dr. Daly (London) and Dr. Beverley of Norwich.

There was a superabundance of material in the form of subjects for discussion and papers : but a great number of the latter could not be read, as the questions set down for

discussion were so comprehensive and important in nature that they occupied most of the available time. There were five in all : three gynæcological and two obstetrical.

The three gynæcological subjects for discussion were :—

- (1) The Method of closing the Abdomen which seems best for preventing Abscesses, Eventrations and Ruptures ;
- (2) The Treatment of Pelvic Suppuration ; and
- (3) The Operative Treatment of Retro-deviations of the Uterus ;

while the two obstetric subjects were :—

- (1) The comparative Frequency and most Common Forms of contracted Pelvis in different Countries, Groups of Countries and Regions ; and
- (2) The Treatment of Eclampsia.

Short abstracts of these have appeared in various journals, but it is clearly impossible to give a general account of them all, such as would be of any practical value, in the space at our disposal. It is therefore proposed to report one discussion only in this number, and to consider the others in the next.

Our report has been made more complete by supplementing the material at our disposal with extracts from other journals—principally *La Semaine Medicale* and *Les Annales de Gynécologie et d'Obstetrique*.

THE BEST METHOD OF TREATING THE WOUND IN
ABDOMINAL SECTION WITH A VIEW TO THE PREVENTION
OF ABSCESS AND HERNIA.

By GEO. GRANVILLE BANTOCK, M.D., F.R.C.S.Ed.

THE subject to which I have the honour of directing your attention is "The Best Method of Treating the Wound in Abdominal Section with a view to the Prevention of Abscess and Hernia."

It will be admitted that in the case of the abdomen we meet with conditions which do not obtain in any other part

of the body. We have to contend against a force, of ever-varying intensity, from the slight movement of natural respiration to the violent muscular action involved in the effort of vomiting, so that the wound is deprived of that rest which is such an important factor in the healing process.

When the surgeon makes an incised wound and closes it again, in order to obtain the best results he aims at securing primary union, or, as it is sometimes called "union by first intention." Important as this is in all cases, it is especially important in the case of wounds involving the whole thickness of the abdominal parietes, for the reason above stated. As, in the natural arrangement of the parts, hernia is a very common occurrence, so, if we add another weak point, we expose our patients to an additional risk of this accident. It may be affirmed that the importance of securing primary union in the cases under consideration is little affected by the length of the incision.

For the sake of facility of discussion, the subject may be divided into two parts, viz. :

The treatment of the wound (1) with the view of preventing abscess, and (2) with a view to the prevention of hernia. These two aspects of the question might at first sight appear to be synonymous, the one involving the other. But it is not so. Thus a wound may suppurate extensively and yet the patient will escape subsequent hernia, or the surgeon may succeed in obtaining perfect union throughout the length of the wound, and yet his patient will subsequently develop hernia. How is this apparent contradiction explained? This will appear in due course.

1. For some years past, that is, since the introduction of the Listerian or antiseptic method, it has been a canon of surgery that all abscesses are the result of the introduction into the wound itself, or into the tracks of the sutures, of "germs," or (as now taught) of full-grown microbes. Hence the surgeon was enjoined to employ means to prevent the access of these disturbing bodies. With those means you are well acquainted. When it again became known that wounds

healed without these measures, and in many cases not only healed, but actually healed better, the destruction-of-microbes doctrine or antisepticism gave way to a very large extent to the exclusion-of-microbes doctrine or asepticism. At the present day I hope I shall not be accused of holding either of these doctrines. On the contrary, I have long held the view that the various forms of the bacterium or bacillus, however characteristic they may be of the conditions under which they are found, do not stand in the relation of cause and effect, as now generally taught ; in other words that they are the effect and not the cause of the conditions under which they are met with.

Had the doctrine of antisepticism (and the treatment founded upon it), or even that of asepticism, been confined to the idea of the introduction of a specific *materies morbi*, it would, at the present day, meet with my cordial acceptance ; for this is the basis of my treatment as indicated in the word *cleanliness*. Lister's later teaching, as given forth in his Berlin address, when he expressed the view that "the germs in the atmosphere may be totally disregarded" appears to have escaped the notice of his followers, perhaps because he went only half way towards a sound and rational conclusion.

You will, therefore, not be surprised that I attribute the formation of an abscess in a wound, or in the track of a suture, not to the entrance of germs or fully formed bacilli, but chiefly to the improper application of the suture in the latter, and more rarely to the introduction of foreign matter between the lips of the wound in the former case.

Thus, when unhealthy pus, old clotted blood, or other dead matter is spilt on a wound, it is very difficult to get the surface clean again ; small particles remain, prolonged attempts to remove them cause injury to the tissues ; the presence of these particles, which act the part of foreign bodies, produces irritation and the familiar consequences follow in the formation of pus, and so on.

In a simple abdominal section for ovarian cystoma, where little injury beyond the incision is done, and the

sutures are carefully applied, it is the rule for primary union to be obtained.

As regards the track of the suture, I repeat that abscess is not due to the entrance of germs, or fully formed bacilli, but to the improper application of the suture, and the improper application consists chiefly in the strangulation of the tissues enclosed in the loop by which their vitality is impaired in greater or less degree. I affirm that I have never seen pus issue from the track of a suture without being able to say that the particular suture had been pulled too tight.

But perhaps I am met with the objection that pus so obtained contains bacilli which are found to be more or less associated with such conditions, and hence that these bacilli are the cause of the presence of the pus. I admit that the bacilli may be characteristic, but I deny the effect hitherto attributed to them. I am only at liberty at present to say that the harmlessness—I will go further, and say the beneficent action—of bacilli hitherto regarded as possessing the most virulent properties, is now fully demonstrated, and it is proved beyond all doubt that the various forms of bacillus serve a useful purpose as scavengers. I have never accepted the doctrine of phagocytosis and, if these later observations, to which I have referred, be correct, then it will not be out of place to call it eminently fantastic, and the product of a too lively imagination.

I arrive, therefore, at this conclusion, viz., that in order to secure primary union it is necessary to bring the raw surfaces carefully into apposition, to take care that no foreign body interposes between the surfaces, that the sutures are not pulled so tight as to cause strangulation, and that the use of a so-called antiseptic substance does not aid the healing process. The latter condition is now almost universally admitted. In proportion as these matters are efficiently carried out, in that proportion will be the success.

The occurrence of a small amount of pus in the track of a suture is a matter of very little, if any, importance. The

formation of pus between the lips of the wound, as it must necessarily be in much larger quantity, is more important, and may be serious. I am fortunately in a position to say that while an abscess involving the length of the wound occupied by two or three sutures has probably occurred in only 1 or 2 per cent. of my cases, and could usually be traced to the presence of matter acting the part of a foreign body between the raw surfaces, I have in only one instance seen the whole length of the wound give way (with the exception of the peritoneum). In this case the contents of a dermoid tumour were spilt over a wound of about $2\frac{1}{2}$ inches in length. Ultimately, however, a very good cicatrix was obtained, and no evil consequence followed.

(2) I now come to the question of the mode of closing the wound with a view to the prevention of hernia. Hitherto the question has been one of principle, but now I must pass on to details.

Anatomical considerations, no doubt, in the first instance dictated the site and direction of the incision, and, with the exception of special cases, experience has proved that the median incision is the best adapted for the great majority of abdominal sections. In the middle line it is possible, with care, to enter the peritoneal cavity without wounding any of the fibres of the two muscles which lie parallel to it, one on each side. Premising that in all cases it is advisable to make as small an incision as possible, I affirm that in a young and healthy subject, with well-developed muscles and only a moderate amount of fat, and when the incision can be confined to the space between the pubes and the umbilicus, it is sufficient to use the interrupted suture, embracing the whole thickness of the parietes. Thus the suture will pass through skin, subcutaneous fat, muscular aponeurosis, muscle, subperitoneal fat and peritoneum on one side, and in the reverse order through the opposite side; and while on the one hand it is advisable to include about half an inch of skin, on the other the extreme edge of the peritoneum only should be taken up. In such a case as I

have indicated I contend that such a suture is sufficient and yields perfect results.

But in actual practice we meet with various departures from this which I call the normal state. Thus (a) the patient may be very much emaciated, both muscle and fat being reduced to a minimum ; or (b) the abdominal walls may contain an inordinate amount of fat ; or (c) it may be necessary to extend the incision beyond the umbilicus. These conditions call for more or less different treatment.

(a) When the parietes are very thin I deem it advisable to close the wound in two or three stages. Thus, the peritoneum is first closed by a continuous suture of catgut (if I could be absolutely certain that no suppuration would occur I would always employ fine silk-worm gut for the suture), then the rest of the wound is closed by interrupted sutures embracing skin, aponeurosis and muscle ; or in extreme cases a buried suture is used to bring the muscle and its aponeurosis together, while a third row of suture closes the skin. But it is exceedingly rare that more than two rows of sutures are required.

(b) When the parietes contain an inordinate amount of fat I close the peritoneum first, and then use an interrupted suture embracing the tissues between the skin and peritoneum.

(c) When it is necessary to extend the incision beyond the umbilicus I believe it is the general custom of operators to pass on one, usually the left, side of that structure. I prefer to cut right through, to remove the redundant skin, to split the parietes on each side so as to make a broader surface, and to close the peritoneum first in all cases. If the umbilicus be passed on one side the raw surface will very often not exceed an eighth of an inch, and the risk of umbilical hernia is very great. In a young and well-nourished subject I regard it as a waste of time to suture the wound in stages, but in the emaciated the extra time is well spent. The question of the material best adapted for sutures has exercised the minds and ingenuity of surgeons to

a very large extent. When I began practice more than thirty years ago silk thread and silver wire were chiefly employed. It was held that in cases of vesico-vaginal fistula the silver wire had a great deal to do with the successful results of the more recent operations, and in some at least of the earlier abdominal operations silver wire was used for the sutures. But experience showed that it was not without disadvantages which constituted a valid objection, and silk ere long entirely supplanted it. Many years ago a few experiments, first in the operations for the cure of perineal injury and vesico-vaginal fistula, and then in abdominal section, convinced me that in silk-worm gut or *fil de Florence* we had both the material and form which constituted the very best suture. The points in its favour were that it was obtainable in convenient lengths and of suitable thickness for different purposes, that, when moistened in warm water it was as easily manipulated as silk thread, that it presented a smooth surface like silver wire, and was much stronger than thread of the same size. My observations were made in the pre-Listerian days, and as in those days it underwent no preparation beyond staining with an aniline dye, so it undergoes no other process at my hands at the present day. We hear much of the sterilisation of sutures, &c., in these days. In silk-worm gut we have a suture whose mode of manufacture ought to be sufficient to remove the scruples of the most timid Listerite, or the most devout believer in the doctrine of modern bacteriology.

Such has been my experience that I have for many years exclusively used silk-worm gut for ordinary sutures, whether involving skin or mucous membrane, and that I have equal confidence in it when used as a buried suture. Having been the first to advocate its systematic use, I may be allowed to express the gratification with which I regard its extensive employment, and the fact that those who have given it a fair trial are equally satisfied with their results.

It may be convenient to sum up the preceding argument in the following conclusions :—

(1) Bacteria do not play any part in the production of suppuration, but are the result and not the cause of the conditions under which they are found; hence abscess in the wound or track of sutures is not due to the entrance of "germs" or fully-formed bacilli, but, in the former case, to the presence of matter acting the part of a foreign body, and, in the latter, to strangulation of the tissues by too tight constriction by the suture.

(2) In ordinary cases the simple interrupted suture alone is sufficient for all practical purposes.

(3) In very thin or very fat subjects it is desirable to close the peritoneum separately by continuous suture, while the remainder of the wound may be closed in one or two stages.

(4) For the simple interrupted suture silk-worm gut forms the best material, while for the buried suture cat gut (not chromicised) will probably be found preferable.

* * * * *

The second *rapporteur* on this subject was Professor F. la Torre, of Rome, and the following is a *résumé* of his remarks :¹—

The subject we have before us to-day, viz., the best method of closing the abdomen, so as to prevent the occurrence of abscesses, eventration and ruptures, is a most important one.

It seems to me indispensable, in order to fulfil my task most usefully, to study the question from the double point of view, viz., the clinical and the anatomico-pathological. In order to suitably analyse these two points of view (after consulting nearly all the works that have appeared on the subject), I considered my own practice to be too limited, and that it was necessary for me to resort to the experiences—extended and authentic—of well-known gynæcologists.

I put myself in communication with the most renowned

¹ Translated for the BRITISH GYNÆCOLOGICAL JOURNAL.

masters in abdominal surgery, and I interrogated them on this subject.

As the second point of view (anatomico-pathological) has not yet been studied from the microscopical and experimental standpoint, I have made, aided by my assistant, Dr. Mario Schiaroni (whom I should here thank for his devotion), numerous microscopical researches and many experiments on animals. It is the result of this study that I have the honour to submit to you to-day.

I shall place before you :—

- (1) The modern history of the *suture abdominale*.
- (2) The definitions of hernia and eventrations.
- (3) Their frequency.
- (4) The causes and pathology of hernia and eventrations.
- (5) The closing of the abdomen, *i.e.* (a) the place where the incision should be made; (b) the kind of suture; (c) the method of suturing.
- (6) The results of my enquiry, my own experiences and my histological investigations.
- (7) The conclusions to which I have been led by these results; and lastly
- (8) The series of coloured drawings of my histological investigations.²

I can only give a short *résumé* of all my work; but I consider it indispensable, before stating my belief as to the best method of closing the abdomen, to say a few words as to the definition of hernia and eventration—upon their frequency and upon their etiology and pathology. It is evident that in order to ascertain the consistence of herniæ or eventrations, we must determine their cause; and it is from a knowledge of their causation that we shall be able to learn how we should close the abdomen in order to prevent such complications.

Definition.—Authors, including the special writers, are not yet at one as to the *definition* of post-operative hernia

² These we are unable to reproduce.

and eventration. Some do not distinguish between these, while others separate them into two classes. To my mind the difference between a hernia and an eventration is one of *volume*.

Thus Bourquelle, Wertheimer, Overthorn, Spencer-Wells hold that post-operative hernia is formed by a distension of the cicatrix, whilst Albert, Bonavita, Goulliout and others maintain that eventration is produced either in consequence of the yielding of the cicatrix or because no cicatrix has ever existed (in consequence of the non-union of the aponeurosis).

These definitions are incomplete. Our researches would appear to show that the cause may be perhaps the distension of the cicatrix in those cases, where the projecting viscera are small in volume (*hernia*); but in the large majority of cases the *hernia*, or better, the *eventration* (voluminous hernia) is due not only to the tearing of the cicatrix but also to a partial or total want of union of the aponeurosis.

We have therefore defined them thus :—

Post-operative herniæ are formed by the projection of a portion of one or more viscera completely between the edges of the recti muscles in consequence of the distension of the cicatrix which unites them, or because of the tearing of the cicatrix, as well as the want of primary union of the aponeurotic edges.

Frequency.—Formerly hernia was very frequent when the abdomen was closed after the extra-peritoneal method. Now that the abdomen is closed after the intra-peritoneal method, with the aid of sutures in layers, its frequency is much diminished; from my statistics it would appear to be 8 or 10 per cent.

Etiology and Pathology.—The causes of herniæ are still not fully known. They are *determining* and *occasional*. The *determining* causes are a thin cicatrix, wanting in firmness, and an opening in the musculo-aponeurotic plain. The *occasional* causes are all those circumstances which retard the union of the wound, which favour distension and

laceration of the cicatrix, and which tend to promote union by *second intention*.

Again, from the clinical point of view, the causes of herniæ and eventrations may be *direct* or *indirect*.

The *direct* causes may be subdivided into three classes :—

(1) Those that prevent union of the edges of the wound in the aponeurosis, such as when sutures are so badly applied that it is impossible to properly co-apt the edges of the wound, or when the stitches are so far apart that fat or peritoneum projects between them.


(2) Those that promote union of the whole or part of wound in the aponeurosis by second intention, as suppuration and drainage.

(3) Those that stretch the cicatrix, as abnormal intra-abdominal pressure, enormous distension of the abdomen by tumours, growths, &c., large deposit of fat in the thickness of the abdominal wall, &c.

The *indirect* causes include all those circumstances which predispose to distension in the first place, and next, those that predispose to the rupture of the cicatrix, such as removing the sutures or permitting the patient to get up too soon ; the neglect of the patient to wear an abdominal support ; or the use of sutures that become absorbed before the cicatrix has become firm.

Does the direction, extension, and situation of the incision favour the production of a hernia ? The answer, as far as the direction of the line of incision goes, whether oblique or crooked, is No, but with regard to the direction of the incision itself, is Yes ; because in leaving the median line, muscular tissues are cut through, and the cicatrix which results, being firm, will offer more resistance to the formation of hernia than when a median incision is adopted.

It appears from some authors—H. Durand, Waldo—that the lengthening of the wound *does not* favour the production of hernia, because with a large incision the edges of the wound are not bruised, and therefore reunite by *first intention*.



The situation of the incision, whether too high or too low, does not, in spite of what Favola, Brucivita and Gleward have said, exercise any positive influence, seeing that herniæ are met with at all points of a cicatrix, even at the superior angle. The intestines insinuate themselves wherever they find a feeble or open point, and such points may occur anywhere in the cicatrix.

It is necessary, in view of the principle that it is indispensable to obtain union of the musculo-aponeurotic plane also to consider the tissues that are to be sutured.

We must then determine :—

(1) Which tissues should be divided and brought together in order to obtain union by *first intention* and a firm cicatrix ;

(2) Which sutures best co-apt the edges of the wound and protect it from infection ; and

(3) What method of suturing best assures a large surface of contact between homologous tissues.

We have noted that the muscular tissues are the best to incise and suture in order to obtain union by *first intention*, because they are rich in connective tissue and vessels ; while on the other hand the aponeurotic tissues, being not so provided, are less favourable to such union.

Nevertheless, the linea alba is nearly always selected for the incision. No one knows exactly why this should be. In the days when laparotomy was first recognised, there existed the rules and habits which had been well matured by those who practised *post-mortem* Cæsarian section. Then the doctrine of Mauriceau prevailed, which, in opposition to Roussel's method of making a lateral incision in the case of living women, prescribed a median incision in the linea alba in *post-mortem* Cæsarian section. Mauriceau maintained that by this means the abdominal cavity was more easily penetrated, while with a lateral incision a thicker abdominal wall was met with. As the operation was then conducted on dying women, no question of cicatrix existed. Nevertheless the precept of Mauriceau impressed itself on

several generations of medical men. There have, however, always been certain surgeons (as Levet, Malgaigne) who made their incision over the muscles in order to obtain a firm cicatrix.

Later, the early laparotomists (G. MacDowel, Mercier, Nathan Smith, and others) made use of a lateral incision, running parallel to the median line. But this practice was very quickly abandoned, because Spencer Wells accepted the precept of Mauriceau, and opened the abdomen through the linea alba.

None of the great operators have since departed from this teaching of Spencer Wells, who, says Olshausen, has never made his incision outside the linea alba.

Is the median incision through the linea alba an ideal one? As an incision I say Yes; as regards tissue to suture I maintain No.

The median incision offers evident advantages of which we all know. The most important are that one cuts *presqu'à blanc* and avoids hæmorrhage. Since the researches of Dembouski, Mickulier and Veit-Neiser on the effects of a little blood entering the peritoneal cavity, these advantages have no longer the same importance.

On the other hand the incising and consequent suturing of a wound made in the aponeurotic plane of the linea alba present very serious inconveniences, such as a thin cicatrix that tears easily, or a faulty union of the aponeurotic edges; conditions favourable to the formation of hernia.

That the cicatrix in muscular tissue is firmer than that in aponeurotic tissue we have proof in a clinical fact. The cicatrix in the uterus that has been the subject of Cæsarian section is proof against the distension of a subsequent pregnancy whilst the cicatrix in the linea alba easily yields.

The median incision is still adopted because in the first place we started with a false idea of the mechanism of the formation of herniæ and a consequently false conception of the means to prevent it—busying ourselves more with the little details of technique without thinking of the consequ-

ences to the cicatrix. Secondly, because we have followed blindly the ancient doctrines confirmed by Spencer Wells. Thirdly, because a lateral incision interfered with free manipulation of the opposite side, and fourthly, because we feared the discharge of blood.

I believe these reasons are not sufficient, and that the time has come to carry the discussion into other procedures, which without putting women to any greater danger, give us better results. That is to say I prefer an incision through the muscle. My own experience and microscopical researches confirm me in this opinion.

In fact, Storer, Hogen, Torn, Fritsch, Abel, Pasquali, Bold, Edebohls, Le Dentu, Sneguiref, Ferrari, P. Bouilly, Calderini, Döderlein, Veit, Berruti, Biondi, Muller, Baldy, Ehrendoefer, Baker, Noble, Van Canwenbergher, Pestalozzi and Doliri, &c., think it necessary to depart from the middle line and involve the recti muscles in some fashion or other in order to make a good cicatrix.

What as a fact do we do in the treatment of eventration? We simply remove the hernial sac as far as the muscles and then suture them. Now if we do that in a second operation, it seems to me more reasonable to do it at once so as not to have to do it later.

I have already stated that I accept the median incision but modified in the sense that I do not include it in the suturing of the aponeurotic plane, as I will directly show.

The methods of suturing in the substance of the muscle most in use at the present time are those of Fritsch, Edebohls and Abel. All three cut down on a rectus muscle, carefully leaving in place the aponeurosis of the linea alba. The cicatrix which is formed is excellent; but it has this inconvenience, that in leaving the aponeurosis of the linea alba one may see it stretch in consequence of pregnancy, of tumours, ascites, &c., and become a pseudo-eventration, large and serious, necessitating interference by laparotomy. Such were the cases of Le Dentu, Magal, De Czerny, &c. It is therefore necessary to modify this method in those cases,

where the patient may become pregnant after the operation or where it is known that distension of the aponeurosis is likely to exist, in such a way as to remove the aponeurosis between the muscles and suture so as to include the edges of the recti muscles. That is the best method.

Sutures.—The sutures most in use are silver, horsehair, silk, and catgut.

Silver.—The enthusiasm formerly existing for this suture has cooled, though Schède has tried to revive it, and many surgeons, since his time, have used it with great success. Its advantages are—that it can be easily cleansed and sterilised, that it does not oxidise, and that being of a homogeneous metallic substance, it does not harbour micro-organisms. It has, however, certain inconveniences; it twists itself into knots, at which it breaks easily; when the ends are cut short they prick, when left too long they are liable to be caught.

Horsehair (of Florence).—Being made of a hard smooth material with a longitudinal canal is easily cleaned and sterilised. Guérmonprez considered it possible to make knots that held very well with this suture, thanks to the canal, but Pozzi denies it. Horsehair is well tolerated by the tissues, and is not absorbed. This double qualification makes it suitable for patients who are subject to coughs and vomitings, because it can be left in the tissues for a longer period. It can be kept for a considerable time in an antiseptic solution. Its drawback is that it fissures and splits almost like a crystal; on account of this it is not suitable for ligatures *à court rayon*, but is especially excellent for sutures *à points séparés en masse*.

Silk.—Though the structure and nature of silk would make it least suited for sutures, the fact of being able to sterilise it well, enables us, nowadays, to use it whenever we wish. Its drawbacks are that it unravels, that it breaks if left too long in an antiseptic solution, that it is capable on account of its porous structure of absorbing organic liquids, and so becomes the source of a secondary infection. In deep sutures, too, if not quite pure, it is liable to give rise to

abscesses or fistulæ, which might remain for a long time. In cases where infection is feared, silver wire or horsehair are preferable.

Catgut, made from the intestine of the sheep, is supple and at the same time solid ; it becomes from its animal properties softened and absorbed. These properties have given catgut an enormous importance. In Pozzi's opinion there is no suture in gynæcology or surgery to compare with it. It is absorbed in from 8 to 15 or 40 days, according to its size and preparation. Chromic catgut, and that prepared by Erdebohl's with bichromate of potash are not absorbed for 40 days. Catgut can be used like silk for any sort of suture.

The drawbacks to this excellent suture are that it is friable and is difficult to sterilise. This latter is the more serious disqualification ; and the sterilisation process is lengthy, detailed, and at times, difficult. It is necessary to sterilise it oneself, and the result is that each operator has his own method of procedure. The process most generally adopted is that of Riverdin, and when there is no heating apparatus, Lucas Championnière advises Lister's primitive process.

From an aseptic point of view there is but little choice.

Nevertheless silk is the suture almost exclusively used, and catgut comes next. They are now well sterilised, and anything can be done with them. Erdebohl's has recently introduced a very important modification in the preparation of catgut. He prepares it in a solution of bichromate of potash, and afterwards sterilises it. Thus prepared the gut remains about six weeks before it is absorbed, and it thus allows perfect union to take place.

The *method of suturing* is of great importance and varies with the tissues on which it is practised ; thus all forms of stitches are not equally good when the aponeurosis of the linea alba is brought together, whilst they may be all excellent when used in the muscular tissues. My histological researches prove that.

Since Koracs inaugurated suturing in three stages, since Broer, Schröder and Martin have generalised the method into planes, super-imposed, or buried, we ought not to discuss other methods. Suturing in several planes forces itself upon us. Notwithstanding that, we may be sometimes obliged to fall back on other types. The methods most in use are those which bring the tissues together, *en masse*, in layers, and which are continuous or interrupted—we have then four kinds of sutures.

My researches show that suturing *en masse*, practised with all precaution does give rise to hernia, while suturing in layers succeeds well. On the other hand, all four of these methods have given good results, when practised on muscular tissues.

The indispensable conditions for good suturing are, that there should be perfect coaptation of the whole length of the incision, so that there should be no *espaces morts*, and that the stitches should not be so tight as to cut the tissues. These conditions are difficult to obtain when suturing the incised tissues of the middle line *en masse* with silver wire; for it compresses them excessively and it is not possible to get sufficient coaptation without undue constriction of the tissues, causing the aponeurotic edges to curl up. This same metallic thread lends itself more readily when the edges are thicker as they are when the aponeurosis of the linea alba is dissected off and the muscles are refreshed; then the surfaces are larger, more likely to unite, and the edges hardly ever curl up. Silver wire is not suitable when the abdominal walls are surcharged with fat. Of late, Schède uses it even for deep buried sutures. I do not think it possible to generalise about this species of suture.

The same may be said of horsehair. It is not suited for over-cast sutures *à petit rayon* but it is good for suturing *en masse*. Guérmonprez values this suture as Erdeböhl's did formerly, but the latter has given it up, because, when left in the thick tissues, it gave rise to suppuration. Bantock

and Sānger use it and Chase finds it good for suturing *en masse*. However that may be, the best sutures from all accounts are catgut and silk—the latter has this advantage, that it can be left *in situ* without losing its strength and becoming absorbed even when very thin, and that is not possible with catgut.

From what has been said, I think we may conclude :—
1. That after division of the linea alba, the tissues most suited for suturing are the muscles ; 2. That the best sutures are silk and catgut ; 3. That the best method of suturing is that in layers. It is this method of closure, practised under such conditions which serves as the base of the operative cure of hernia. It is the procedure that I have the honour of laying before you, and that I consider to be superior to those of Fritsch, Abel and Edebohls ; because by the removal of the linea alba the only cause of hernia that exists in their methods, is avoided.

My technique is as follows :—

I divide the skin, the aponeurosis of the linea alba and peritoneum by an incision exactly in the middle line as in all laparotomies, and I do so in order to obtain all the advantages that such an incision offers. I then perform the operation, whatever it may be. The toilet of the peritoneum being finished, I proceed to close the peritoneum with a first plane of overcast stitches of catgut. Then, instead of suturing the edges of the aponeurosis of the linea alba, I remove them by cutting either with scissors or knife along the internal border of the recti muscles, taking away, be it well understood, a thin slice of the muscles themselves. As soon as the oozing ceases, I make a second plane of suture with an overcast catgut suture, uniting the edges of the fascia transversalis (or that portion of it lying behind the rectus muscle). With a third suture of silk or coarse catgut I bring together the two recti muscles, taking care not to draw it too tight ; for if that is done, the cut surfaces do not remain in contact, and cannot unite when the edges of the muscles are separated to the extent of several millimetres,

but allow a thin layer of cicatricial tissue to be formed. When, however, the cut surfaces are perfectly adapted to each other the *éléments anatomiques* unite without even a trace of cicatricial tissue. A fourth layer of continuous catgut suture unites the anterior sheath of the recti muscles, while a fifth of silk, silver wire, or horsehair, continuous or interrupted, brings together the skin and subcutaneous tissue.

If there is superabundant skin, resulting from the loss of aponeurosis, a portion may be cut away; and the same applies to fat. Such is the procedure I suggest to you and it is very simple. My histological preparations show that it defies all criticism, whether it be as method of union, or a prophylactic against hernia. In fact, if we consider the causes of hernia, we easily comprehend that such an operative proceeding alone can prevent their realisation.

The objections that can be raised are these:—It is too long a process and it requires five rows of sutures instead of three. This is true; but it appears to me better to lose a few moments in order to close the abdomen satisfactorily, and insure the best possible union of the musculo-aponeurotic plane than to have an eventration which would require another operation.

There are cases where the single suture in layers is not sufficient, and it is then necessary to employ a suture *en masse* in addition.

The variety of cases and circumstances under which it may be necessary to operate being multiple we should not limit our choice of suture or method.

Experimental researches.—In our experiments on many dogs, we proposed to see if that which anatomy, physio-pathology, clinical observation and scientific reasoning suggested, could be demonstrated by experimental fact.

We have studied the kind of abdominal wall that is least liable to herniæ. We have operated, taking all precautions as with the human being, and we have made use of each kind of suture upon groups of dogs of six each. In one

group we left in place the aponeurosis of the linea alba, suturing the edges. Upon another group we removed the linea alba and sutured muscular substance and the edges of its sheath. We used silk, catgut and silver wire, and the following is the clinical result :—

(a) Suture in layers, continuous, interrupted and mixed. Each kind of suture was used six times upon the aponeurosis of the linea alba, and in these, after one month, there was hernia in 5·5 per cent. Similar sutures were employed in the same way 6 times in the muscles, after excision of the aponeurosis, with the result of 6 cures (0 per cent. of hernia).

Of suture *en masse*. This method of suturing was adopted 6 times after excision of the linea alba, and gave 5 cures and 1 hernia (20 per cent.), when used 6 other times on the full aponeurosis there was 1 cure and 5 eventrations—nearly 100 per cent.

This experience shows us :—

(1) That sutures in layers (whatever may be the kind) give the best results.

(2) That in the only case in which it failed, it was due to an interrupted suture over the linea alba.

(3) That suturing *en masse* gives its best results when made through the muscles, and

(4) That suturing *en masse* when used in the aponeurosis of the linea alba gives disastrous results.

Microscopical researches.—At the end of eight months' time the animals were sacrificed in order to make a microscopical examination.

The results were favourable to suturing in layers, whatever kind were used, provided the aponeurosis was removed. The only case of yielding of the cicatrix and relative hernia was one where the suturing was done in stages, with interrupted sutures and without excision of the linea alba.

Suturing *en masse* with excision of the aponeurosis gave good results, but every case where this method was used without removal of the aponeurosis showed a more or less

voluminous hernia. Histological examination thus confirmed the clinical deductions.

Dr. DOLERIS agreed with the *rapporteurs* on almost all points, particularly as to not drawing the sutures too tight. As a result of some experiments on dogs by Dr. Cazin (of the Maternity Hospital in Paris,) and Dr. Isaac, he had in ten cases made his incision in the rectus muscle, entirely clear of the linea alba, and closed the wound by several rows of buried sutures. The results were very satisfactory.

When the abdominal wall had been distended and thinned by a large tumour or repeated pregnancies, he resected as much as possible of the linea alba, but he had never deliberately resected the whole of the fibrous band as Dr. la Torre advocated. He would imagine that with that method there would be such an abundance of skin as to prevent the exact approximation of the edges, with a resulting ridge. He did not consider a post-operative hernia as analogous; for in that case only the cutaneous hernial pouch was cut off, after which approximation of the skin was easy. He therefore confined himself to partial resection of the linea alba, without going so far as to directly approximate the recti muscles.

The experiments on dogs must not be considered conclusive, unless the sutures were applied in the supra-umbilical region, for the infra-umbilical region in these animals did not sustain any efforts. The microscopical examinations of Dr. la Torre proved, he thought, in any event that union was immediate and perfect.

Professor RAPIN for the last two years had adopted a transverse incision three or four centimetres above the symphysis pubis, as suggested originally by Professor Küstner under the name of "Kreugschnit." His procedure was as follows:—He made a transverse incision, concave above, from six to ten centimetres in length and comprising the skin and subcutaneous tissue as far as the fascia; he then dissected the fascia along the linea alba and fixed the upper skin-flap by a temporary suture a little below the

umbilicus, after which he made a vertical incision, from four to eight centimetres long according to circumstances, in the mid-line through the fascia, recti abdominis and peritoneum. To replace the tissues, the wound was closed by three rows of sutures. Exact coaptation of the edges of the skin was of great importance, in order to obtain a cicatrix which was barely perceptible. The sutures should be removed early, on the third day, and even sooner, as otherwise the marks would remain visible on the skin for a long time.

He had operated in this way on seven patients with good results, and he recommended it especially in circumstances where attention must be paid to appearances.

Dr. LAROYENNE was in the habit of extending the incision only to seven or eight centimetres above the pubis, when possible. He thought the satisfactory results he had thus obtained were probably partly due to the pyramidal muscles or fibres from the recti not being interfered with. When he had recourse to drainage, he obtained immediate secondary union by means of one or two metal wire sutures placed simultaneously with the drainage tube, and at the same level, passing through the fascia, muscular layer and peritoneum, but not the skin. These sutures were drawn tight when the drainage tube was removed. He thought that exclusion of the skin expedited union.

Dr. BYFORD (Chicago) considered that post-operative ventral protrusion was due either to infection or defective coaptation of the layers of the abdominal wall. He made a clear-cut incision, avoided pressing the tissues, replaced and sutured them layer by layer. He preferred a median incision and was in the habit of using a certain number of buried sutures including the muscles, aponeurosis, and peritoneum, but before drawing these tight he pressed other sutures through the entire thickness of the abdominal wall. The only hernia that had occurred in his practice, were in cases in which he had had recourse to prolonged drainage.

Mr. ALBAN DORAN concurred with the statement of Professor von Winckel, that two years must at least elapse

before it could be said that no post-operative hernia had occurred. In a case in which he himself had operated in 1891 there was no hernia last year, but a small one was noticed this year. He preferred silk for buried sutures. He thought that too much peritoneum was frequently taken up in the suture, and was thus interposed between the tissues tending to weaken the wall. It appeared to him to be a question whether it would not be better to follow Greig Smith's plan of not suturing the peritoneum at all. Flatulence he looked upon as a cause of cicatricial weakening and much more to be considered than vomiting or coughing.

Professor AMANN (Munich) usually had recourse to sutures in several layers. When the recti muscles were not separated from each other, he made a lateral incision through one of the muscles; when they were separated he adopted a median incision, divided the sheath of recti muscles, resected a part of the linea alba and then sutured muscle to muscle and fascia to fascia. He had not for some time used buried sutures, but instead passed the needle through the skin near the right margin of the wound, the tissues and the peritoneum close to its edge, continuing on the opposite side through the peritoneum, muscular layer and fascia; at this point he stopped in order to make a loop with the same thread, comprising the fascia in the right side; this was approximated to that of the left and then the needle was passed through the skin of the left side. The result was a suture *en masse* with a supplementary loop with a view to insure union of the edges of the fascia. Silkworm gut was used and allowed to remain for twenty days.

Dr. CONDAMIN (Lyons) maintained that it was sometimes impossible to bring into immediate contact the margin of the musculo-aponeurotic wound by ordinary sutures. He advised in these the *corset-string* suture. This consisted of an uninterrupted suture passed from above downwards through the entire peritoneo-musculo-aponeurotic layers, but the loops were not drawn tight lest the intestine should get in the way when the later loops were being made. The loops were then tightened beginning at the top with a blunt

hook and this was done several times till co-adaptation was perfect. The fascia above was then brought together by a continuous catgut suture. He had made a *post-mortem* examination in such a case and found the peritoneum satisfactorily united. He thought this method was suited to voluminous post-operative ventral protrusion, large umbilical hernia, supra-umbilical laparotomy, laparotomy for peritonitis with distended loops of intestines and cases where there was loss of tissue in the abdominal walls.

Dr. ENGLISHORN formerly used interrupted sutures comprising the entire abdominal wall. Then he tried, while still suturing the entire abdominal wall, but before tying his sutures, an additional catgut suture to the peritoneum and fascia. Latterly he made his silk sutures include the skin, muscle and fascia only, but not the peritoneum. These sutures should not be drawn too tight.

Professor QUEIREL (Marseilles) thought that three points were now settled, viz., that the incision should be sufficiently long, that the linea alba should be disregarded, that suturing should be in layers. He himself closed the peritoneum with catgut, then united the muscles and fascia with buried silk sutures and used horsehair superficially. In the only failure he had met with, he used decalcified plates in the second operation as recommended by Thirion with excellent effect.

Professor REIN (Kiew) agreed with Dr. Bantock in preferring interrupted sutures for most cases, especially in multiparæ. He reserved continuous sutures for those multiparæ with thin and weak walls.

Dr. SABINO COELTRO (Lisbon) preferred interrupted braided silk sutures, a deep row passing through all the tissues and a superficial row only through the skin. When a drainage tube was necessary he used silver wire or silk-worm gut as less likely to cause secondary infection.


Dr. W. LATZKO (Vienna) after examination of a number of anatomical preparations of cicatrices following different operations, favoured suturing in three layers with deep stitches for the muscular layer.

*MEETING OF THE BRITISH MEDICAL ASSOCIATION
AT CARLISLE.*

PROCEEDINGS OF THE SECTION OF OBSTETRICS AND
GYNÆCOLOGY, July 29, 30, 31, 1896.

The President of the Section, Dr. J. HALLIDAY CROOM, in his opening address, after referring to the remarkable evolution and brilliant results of modern gynæcology, dealt more particularly with the question of the relief or cure of cancer of the uterus, by vaginal hysterectomy. The malady was estimated to affect about 8,000 women at the present time in England and Wales alone. When diagnosed early, he believed that by vaginal hysterectomy the disease was as curable as cancer of the breast, but when it had invaded the surrounding tissues, the discharge and hæmorrhage soon returned, and the operation was not only useless, but in many cases absolutely shortened life. A correct diagnosis, often extremely difficult, could generally be made with due care and attention, and it was far better for a uterus that had ceased its function to be removed, even though not cancerous, than for a malignant case to be overlooked. There was a tendency to perform this operation too often for conditions not in themselves necessarily fatal; it nevertheless offered the best prospect of cure in some cases of small fibroids and prolonged hæmorrhage, after other means had failed; in his experience such cases were rare. In acute puerperal sepsis, purely local measures could not be of much avail, and the risks of the operation were greatly increased; in cases of slow absorption, irrigation and curettage gave satisfactory results; the post-partum condition most suitable for vaginal hysterectomy was, he thought, deciduoma malignum.

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Salpingo-oöphorectomy, an excellent operation in itself, but in the earlier days overdone, was now limited to gross pathological lesions of the ovaries and tubes. Removal of the ovaries for bleeding or rapidly-growing fibroids was being supplanted by abdominal hysterectomy; ligaturing the broad ligaments and uterine arteries, and the intra-peritoneal method and the removal of the whole uterus had made this operation a much more reliable way of dealing with those growths, the dangers of which are now known not to cease at the menopause. The attendant mortality was still most undesirably, perhaps needlessly, high, and urgent symptoms alone could justify its performance. Referring to Dr. Beatson's suggestion for the removal of the adnexa in cases of mammary cancer, supported by the cure of an apparently hopeless case, and marked improvement in others, the President said he had not found women who had lost their ovaries more exempt from cancer than others; the recent discovery and development of oöphorectomy for the cure of osteomalacia was a notable proof of the influence of these organs on the general economy.

Hysterectomy occupied a good deal of the attention of the Section. Dr. Donald, of Manchester, gave the details of seven cases of removal of the uterus for fibroids by the intra-peritoneal method, one fatal from pneumonia forty-six days after the operation, and four cases by the combined method. Dr. Macpherson Lawrie related six successful cases of total extirpation *per vaginam*, four for malignant diseases. Dr. T. Arthur Helme, of Manchester, also contributed a paper on "Total Vaginal Hysterectomy," with ten successful cases. In the subsequent discussion Dr. Christopher Martin on the basis of thirteen cases, all successful except the last—a case of cornual pregnancy—and Mr. Merse, of Norwich, both spoke in favour of total extirpation. Dr. Le Bec's paper on "Total Hysterectomy for Big Fibroids" was not read till the third day. It was illustrated by a table of a large number of successful cases and a series of diagrams showing the method he employed. Professor Wallace, of

Liverpool, in a paper "On the Evolution of the Treatment of Uterine Fibroids" read July 30, deprecated unnecessary operations, insisting that it was only on such growths as were cystic that the menopause had no curative influence.

The treatment of uterine, mammary and other growths by electricity formed the subject of a paper by Dr. Herbert W. White, of Bradford, who instanced the symptomatic cure of five uterine fibroids, and a great improvement in a case of uterine cancer, from the use of the positive pole in the vagina with a current from 80 to 100 milliampères. In two of the fibroid cases the symptoms recurred, but were again successfully treated; the malignant case died from metastases twelve months later. The paper was accompanied by photographs demonstrating the benefits derived in other cases. Dr. Inglis Parsons and Mr. Stuart Nairne confirmed the advantages of the method.

After the President's address, Professor Cameron opened a discussion upon dysmenorrhœa, which has appeared in full in the Journal of the Association with the papers above mentioned (*British Medical Journal*, October 24, 1896, *et seq.*) Very different views were expressed as to the frequency of the spasmodic form, and as to whether ante-flexion was a cause, or merely an association, but it was admitted that dilatation gave relief for a time, though the process had to be repeated. Much stress was laid on the constitutional origin of the affection, especially in the anæmic and rheumatic; on the dangers of alcohol and opiates; on the evil effects of concentrating the mind on the uterine organs, and on the benefits of healthy occupation, and especially of cycling, for anæmic girls. The absolute necessity that arises in some cases for conservative or other operations on the adnexa was also stated. Dr. Connell, Vice-President, pointed out that in married women temporary abstinence from conjugal relations and dilatation was not infrequently followed by conception and cure of pre-existing dysmenorrhœa, and Professor Cameron, in his reply, spoke very strongly on the danger arising from the measures now too commonly taken to prevent fertility.

The business of the first day was concluded by an interesting paper by Dr. G. A. Turner, relating how in the island of St. Kilda, the mortality from tetanus neonatorum (formerly 67·2 per cent.) had been successfully overcome by the antiseptic (iodoform) treatment of the umbilical cord. He pointed out that even in other parts of our island this disease is not unknown, and that erysipelas neonatorum has caused 1,636 deaths in six years. Our practice in treating the cord was, he thought, behind our knowledge, and should be antiseptic. In his own practice he found a mixture of emol-keleet and loretin, which has no bad smell, as effective as iodoform.

On Thursday, July 30, Dr. Amand Routh introduced secondary post-partum hæmorrhage as the subject for discussion, defining it as such bleeding as occurred after the practitioner had left his patient with a well-contracted uterus. His conclusions, that such hæmorrhage was due to uterine inertia from emotion or fright, to the partial detachment of a retained portion of the placenta, separation of thrombi, or the improper use of ergot before the birth of the child; that it was to be met by emptying the uterus, bimanual compression or kneading the organ between the inner and outer hand, and if necessary compression of the abdominal-aorta by the inside hand, hot douching, &c.—were generally agreed to.

Professor Wallace accused undue haste in emptying the uterus and mentioned the liability of “bleeders” to suffer.

Dr. James Ritchie spoke of prophylactic treatment, as did Professor Byers, and of the copious hæmorrhage that, in sub-involution, sometimes occurred at the first menstrual period. Dr. Donald had met with cases in which hæmorrhage, with symptoms of infection, was due to intestinal poisoning from overfeeding and constipation, and had yielded promptly to a dose of calomel and a saline purge.

In connection with Dr. Berry Hart’s paper “On the Symptoms and Structure of the so-called Fleshy Mole,”

illustrated by drawings and specimens (*v. loc. cit. sup.*), Professor Cameron showed a specimen of such a mole with a foetus, and concurred in the rarity of this product of conception, its liability to be taken for missed abortion, and possible importance from a medico-legal point of view.

Professor Byers, in an important contribution on puerperal fever, instanced cases which had come under his own observation, in which, after delivery, the pulse had been quickened and the temperature raised by rheumatism, tonsillitis, a recurrent attack of appendicitis, influenza, a pelvic abscess, suppurating ovarian tumours, or the development of rapid tuberculosis. Apart from such, or similar, rare complications, the temperature and the pulse were little altered by the puerperal state. Fever and a quick pulse meant infection, sapraemia or septicæmia, and called for a careful examination of the pelvic floor, vagina and uterus, and local measures, simple or continuous irrigation or curettage, according to the nature and course of the case, as well as for general treatment. Local treatment, he was convinced, was absolutely necessary; the patient should be supported by concentrated liquid nourishment, by quinine, digitalis, strychnine and alcohol. The newer methods of serotherapy, the injection of antistreptococcic serum or of large quantities of normal saline solution might, he thought, prove of great value; and while he had had no experience of abdominal hysterectomy in puerperal infection, in case of any localized mischief within the abdomen or pelvis surgical interference was most important.

Dr. John Williams, of Cardiff, in a paper "On the Value of Antistreptococcic Serum in the Treatment of Puerperal Septicæmia," gave the history of six personal observations, five of them treated successfully, and also mentioned eight cases reported by others. In eleven of the fourteen the injection of serum had each time been followed by a reduction of the temperature and rate of the pulse. Admitting that the staphylococcus, the bacillus coli, or the Talamon-Fränkel bacillus might cause infection, and that no

test short of bacteriological examination could absolutely decide the question, he considered the syndromata of streptococcic infection in most cases definite enough.

Dr. Purslow, of Birmingham, followed with a paper "On the Perforation of the Aftercoming Head," giving cases of his own and advocating its performance through the mouth; and Dr. Inglis Parsons described a case of malignant adenoma of the uterus, a condition denied by many, but proved by this and other recorded cases.

On Friday, July 31, Dr. R. Milne Murray introduced the subject for the discussion on "The Relative Advantages of Forceps and Version as a Means of Extraction in Cases of Moderate Pelvic Contraction," in a lucid and original paper. The question, he said, could not arise in the *justo minor*, but was limited to flat pelves. Version was the classical method, the idea having been that the application of the forceps to the antero-posterior diameter of the foetal head increases the biparietal diameter and aggravates the initial difficulty, while after version a shorter diameter of the head engages in the conjugate of the brim, the head enters like a wedge, and any bulging takes place at the vertex. Dr. Murray pointed out that he had shown at the Edinburgh Obstetric Society, in 1883, that compression of the foetal head in the antero-posterior diameter is compensated for by bulging, not of the transverse, but of the vertical diameter, the occipital and frontal bones slipping under the parietal. The difficulty in forceps extraction is to apply traction in the right direction, the axis of the forceps crossing the axis of the brim at an angle of which the cosine measures the effective, and the sine the ineffective force; in the flat pelvis the angle of error is increased, and the effective force diminished.

The pelvic curve of the forceps in normal cases favours flexion by pulling down the occiput. In flat pelves, the same principle holds good for that parietal bone which is in front, and which, in the grasp of a well-curved pair of forceps, will descend in advance of the other, the Naegele obliquity will be developed, and the sub-parietal, super-parietal diameter will clear the brim.

Axis traction forceps can be applied without difficulty to the antero-posterior diameter of the head in the transverse roomy diameter of the pelvis, with a grasp which, while sufficient to prevent slipping, does not materially compress the head—though any such compression would not increase the biparietal diameter ; they favour the Naegele obliquity, and, compared with version, are less dangerous to mother and to child.

By properly-constructed instruments the axis of traction is made to coincide with the axis of the brim, but those designed for a normal will not do this for a flat pelvis, if used in the ordinary way. In minor degrees of deformity, we can approximate to the right direction by separating the rods from the shanks when making traction, but this is dangerous to the soft parts, and violates the principle of axis traction forceps. Dr. Murray exhibited a modification of the traction forceps he introduced some years ago, which, without impairing their usefulness in normal cases, permits their adaptation to flat or just to minor pelves. The traction rods are continued two and a half inches below the lock, and are then bent at right angles to form limbs four inches in length ; the traction handle is attached, by a hinged joint, to a block running on these limbs, which can be fixed at any point upon them by a pinching screw. The limbs are graduated from 1 to 7, one of the graduations corresponding to the normal pelvis. By shifting the block towards or away from the application handles, the forceps can be adapted to a pelvis whose axial inclination is less or greater than normal. The hinge joint allows the traction handle to fall into the proper position for each graduation of the limb, and, by means of a sector affixed, the line of traction can be kept passing through the centre of the fenestrum.

Professor Cameron agreed that forceps were to be preferred to version in all cases of moderate contraction, as did nearly all speakers who followed, but he preferred his own instruments, which he showed, designed for application in the sacro-pubic plane and had succeeded with them when other forceps had failed.

Dr. Munro Kerr thought that when the occiput was in the larger side of an unequally contracted pelvis, version might be better than forceps.

Dr. Purslow had delivered by version when forceps had failed.

Dr. Fothergill emphasised some of the points in Dr. Murray's paper, and pointed out that it was impossible to exert traction in the pelvic axis after turning.

Dr. Connel, Vice-President, insisted on the paramount superiority of axis-traction forceps to any other form, and on their value in saving the perinæum.

Dr. Christopher Martin then read a communication on hæmatometra and pyometra, with four cases of the former, one with double pyosalpinx; and two of the latter, in a bicornuous and in the right half of a double uterus.

Dr. Edge, of Wolverhampton, also reported a case of uterus bicornis septus, with remarks on the anomaly.

Professor Cameron discussed retroversion of the gravid uterus and its cure by abdominal section.

Dr. Fothergill then introduced the notes of 11 cases in which he had used Walcher's position with advantage, by a description and illustration from life. He had found by measurements of pregnant women that the conjugate diameter of the pelvis is 0.93 c.m. longer when the legs are allowed to hang down than it is in the lithotomy position. Klein's estimate is too small, as some of his cases were not gravid. Walcher himself stated the increase to be from 0.8 to 1.3 c.m. In high forceps cases, and after perforation, placing the woman in this position saves the strength of the operator, lessens pressure on the head and on the symphysis, and on the perinæum by the forceps. In difficulties at the brim not needing forceps, and in breech cases it spares the uterus and abdominal muscles, and saves pressure on the head and symphysis. And in all cases in which the perinæum is in danger, the extension of the legs at the hips relaxes the integument and subjacent parts at the vulvar orifice.

Mr. Stuart Nairne showed a series of preparations illustrating his paper "On the Diagnosis of Early Tubal and Ovarian Disease," and the business was concluded by Dr. de Bec's paper, already mentioned, and the exhibition by Dr. G. Gilbert Bannermann of a remarkable case of *nævus pigmentosus* covering the greater part of the body of an infant; it was attributed by the family to a maternal impression.

It may be mentioned that Professor Cameron and Dr. Amand Routh very kindly consented to open the discussions on dysmenorrhœa and secondary post-partum hæmorrhage at very short notice.

J. J. M.

**SUMMARY OF GYNÆCOLOGY, INCLUDING
OBSTETRICS.**

GYNÆCOLOGICAL.

VAGINAL OVARIOTOMY. By BUMM. *Centralb. f. Gyn.*, 1896,
s. 314.

Giving the history and five cases of the operation, Bumm says that it is most suitable for tumours comparatively accessible and non-adherent, but may always be tried—the wound in the anterior or posterior *cul-de-sac* does not matter—always provided that the surgeon does not persist in terminating the extirpation that way in spite of unfavourable anatomical conditions.

PERITONEAL DRAINAGE: ITS CLINICAL USE AND APPLICABILITY. By GOUBAROFF. *Archiv. f. Gyn.*, xlix. s. 242 (quoted in *Schmidt's Jahrbuch*, 250).

Experience and general considerations have led Goubaroff to prefer porous to tubular drainage. Most German operators agree in this preference. There is no such unity as to the necessity for drainage in general, or the indications for it in individual cases, nor are separation of large adhesions—the use of abdominal irrigation—or the existence of parenchymatous hæmorrhage to be admitted as reasons for drainage. The author makes a very interesting suggestion on the importance of the omentum, with its wealth of lymphatics, as a natural drainage-tube.

ON THE INTRA-PERITONEAL TREATMENT OF THE PEDICLE
IN ABDOMINAL HYSTERECTOMY FOR UTERINE FIBROIDS.

By LOWERS (Courtrai). *Ann. de Gyn.*, xliv., Sept., 1895.

In the treatment of fibromata he has abandoned injections of ergotin as generally ineffective and often dangerous, and castration, because, though it always caused the diminution of the size of the tumours, it was not sure to arrest hæmorrhage. In radical operations, of three Schroeder operations two ended badly, and he turned to extra-peritoneal treatment of the pedicle, and in sixty cases, some extremely difficult operations, had only eight deaths. But the disadvantages of this method, the tedious suppuration, fistulæ and abdominal hernia, induced him to return to the intra-peritoneal method, in which he has adopted continuous ligature of the stump in sections, covering it with a well-stitched anterior flap of serosa. Of twenty-six cases only one fatal. Twice there was a subsequent prolapse of the omentum from the abdominal wound (once in a case of severe phthisical cough) which was removed without harm. In one case there was an hydatid mole in the uterus, and the entire abdominal wound burst open after the removal of the stitches on the tenth day. Renewed suture and uninterrupted recovery.

OPERATIVE TREATMENT OF LARGE MYOMATA. By
WALTHARD (Berne). *Corrbt. f. Sw. Aer.*, xxvi., 4. 1896.

Walthard, from numerous experiments on animals, concludes that secondary hæmorrhage is surely prevented by exact ligatures of the spermatic and uterine arteries and ligation of the uterine stump; if catgut or silk is used the part of the stump beyond the ligature does not die. The restoration of nourishment may be set down to the ligature quickly cutting into the tissues, and on that account elastic ligatures should not be used. The stump is never infected by the immigration of vaginal microbes. Preparation of the cervical canal by strong disinfectants

or cautery is unnecessary, for the physiological protective arrangements in the cervical canal, of which the upper two-thirds, apart from suppurating myoma, gonorrhœa, or puerperal fever, contains no microbes, are thereby destroyed.

Intestinal occlusion from adhesions of the stump to the intestines may be prevented by avoiding any bacterial, chemical, or physical injury of the peritoneum during the operation, by extra-peritoneal treatment of unabsorbable sutures, and by covering the cut surface of the stump with a well-stitched flap of serosa.

POSTERIOR COLPOTOMY. By MACKENRODT. *Zeitschrift f. Geb. u. Gyn.*, xxxiv., S. 348.

Most tumours lie behind the uterus, and Mackenrodt, differing from A. Martin, prefers opening the posterior *cul-de-sac*. There is nothing new in approaching tumours of the posterior uterine wall in this way, but 10 of the 43 posterior colpotomies he has done were for the enucleation of myomata of the anterior wall, and the novelty in Mackenrodt's method is, after opening Douglas' pouch, in dividing the posterior wall of the uterus by a median incision, separating the cut surfaces and removing tumours of the anterior wall through the cavity of the uterus. The bladder is completely out of harm's way, there is no need to drag the uterus down into the vagina, and drainage of Douglas' pouch affords all the advantages of an open wound. In extra-uterine pregnancy this method gives the greatest facility for the separation of adhesions even beyond the umbilicus. A number of specimens established the simplicity of the operation in cases of hydro- and pyosalpinx, tubo-ovarian growths and ovarian abscess. The bimanual detachment of the adhesions had been comparatively easy, and the tumours had afterwards been drawn into the vagina without difficulty and without capsizing the uterus. They are more accessible by this way than by anterior colpotomy, when the bladder and uterus


have to be put aside, and even if they are ruptured, the pus escapes alongside the fingers, and after the operation free drainage can be secured. All his cases of acute suppuration, ovarian abscess and pyosalpinx recovered without accident. In one the pus had undoubtedly been infectious. Pediculization is not difficult; a clamp may be used provisionally before ligature, or may be left *in situ* for twenty-four hours. We can by this way separate adhesions intractable by Schultze's method.

Cystic tumours of the ovary not larger than an apple may be punctured in several places if necessary, seized in a clamp, and any adhesions having been separated, may be drawn down into the *cul-de-sac*. He showed 5 large tumours removed in this way, 2 simple, 2 multilocular and 2 dermoid cysts. He had been able, without anæsthetics, to relieve an old lady of 76 from a tumour which was causing symptoms of incarceration.

ANTERIOR COLPOTOMY. By DÖDERLEIN, *Centralb. f. Gyn.*, 1896, s. 72.

Döderlein has performed this operation 35 times without accident, including 22 cases of vagino-fixation, and 6 of extirpation of cysts or adnexa. He had, however, to resort to laparotomy on two occasions. It is of great assistance for the accurate diagnosis of pathological conditions in the pelvis, and for the decision of the proper mode of intervention, and may, in many cases, take the place of exploratory laparotomy without causing any risk of abdominal hernia.

He prefers a sagittal incision with two small transversal ones to the single transversal one of Dührssen, and the use of vulsella to that of provisional sutures for bringing down the uterus. He restores the organs to their normal position, and in closing the vagina leaves a strip of iodoform gauze to act as a drain to the utero-vesical cavity. For retroversion he closes in the transversal direction, a longitudinal



incision in the anterior uterine wall. In the discussion on the above at the Leipzig Society, Saenger said that when the uterus and adnexa were mobile the operation was easy, but even then the uterus could not always be put in a good position. When the adhesions are extensive there is danger of wounding the spermatic arteries, and the operation may have to be incomplete, or resort must be had to laparotomy. The method was a good one for attacking the corpus uteri, and for conservative operations on the adnexa. Langerhans mentioned the disastrous results of subsequent pregnancies.

J. J. M.

A WORD IN FAVOUR OF ALEXANDER'S OPERATION. By RONCAGLIA, *Rassegna di Scienze Mediche, Dicembre, 1895, Annali di Ostetricia e Ginecologia, 1896.*

Alexander's operation, as practised at first, did not give very satisfactory results, and it was therefore abandoned more and more. The operative technique, although simple, had many times forced skilled surgeons to confess the impossibility of securing the round ligaments. Now, thanks to a modification, the operation is carried out with greater facility and efficiency.

By cutting the aponeurosis of the external oblique upon a sound introduced into the inguinal canal, it is easy to pick up the round ligament where it is biggest, to draw it out, and fix it for a length more or less great. Although this idea occurred contemporaneously to several minds (Polk, Trelat, Schwartz, Newman, Chalet, &c.), yet Roncaglia thinks the priority is due to Bompiani.

From after observation of 16 cases operated upon with this modification (4 for prolapse and 12 for mobile retro-deviations without perceptible disease of the appendages), he concludes that not one had relapse. Often the operation was accompanied by curetting or amputation of the cervix. In three cases pregnancy occurred and went to full term; the delivery was normal, and the uterus maintained its

improved position. From these facts the author thinks that Alexander's operation, as modified by Bompiani, should be accompanied by curetting in cases of metritis with mobile retro-deviations of the uterus without perceptible disease of the adnexa, and in cases of prolapse the cervix should be amputated and plastic vaginal perineal operations done.

THE RESULTS OF VAGINAL FIXATION OF THE UTERUS.

By WORTHEIM (in the *Centralblatt für Gynäkologie*, No. 18, 1895).

He has performed 37 anterior vaginal fixations, and so far has seen pregnancy in 3 cases after the operation. In all 3 cases the replaced uterus retained its position perfectly.

The pregnancy in one case terminated by abortion at the fourth month, in the second it went to full term and ended normally, in the third case it was necessary to have recourse to podalic version.

In the two first cases the fixation was performed through the unopened plica vesico-uterina, in the third case this pouch was opened and the fundus was stitched directly to the anterior vaginal wall. This led to a typical labour as seen after vaginal fixation; the fixation was abnormally firm, and with the onset of pregnancy, as the uterus increased, the vaginal site to which it was attached was drawn higher and higher and more forward, with the tugging on the fixation, like a funnel, and the cervix was forced more and more back, and up to the promontory. At the end of pregnancy the apex of the vaginal depression was scarcely to be reached with the finger, and the cervix could not be reached with two fingers, so far had it risen. The round ligaments like tense bands converged towards the middle line, at an interval of three to four fingers' breadth from one another, and far below the umbilicus, consequently the fundus was here also. Dilatation of the os was very slow—in seven hours not more than to pass two fingers. The anterior cervical lip had the

consistence of an unyielding thick roll, the posterior lip was effaced and passed imperceptibly into the posterior vaginal wall.

In view of the great projection of the anterior uterine wall into the vagina, and of the great strain and dragging upon the posterior wall, rupture of the uterus was to be expected, especially as labour did not advance. Podalic version by Braxton Hicks' method was done under deep anæsthesia, and gradual traction was made on the foot. In three hours the buttocks appeared, and a child was delivered weighing 3,500 grms., and 54 cm. in length.

From his own cases and from published material, the author concludes that, if it is not possible to improve the operation so as to avoid this danger—which is so much proved from published cases; the indication for the use of this method is of necessity limited to cases of prolapse and retroflexion in old women, and in those in whom pregnancy is not possible. The author also thinks that fixation to the bladder, as introduced by Mackenrodt, is of no avail.

Wertheim considers that in every case pregnancy can only terminate favourably when the adhesion has broken down, and otherwise we must only expect abortion or rupture of the uterus. Sufficient stretching of the fixating adhesion without its laceration is impossible. The same lamentable results also follow ventrofixation if the adhesion be only firm enough not to tear through during pregnancy.

THE OPERATIVE TREATMENT OF RETROFLEXION OF THE UTERUS. By V. C. GROOSDEFF, *from the Klinik of Professor Werth of Kiel.* *Vratch*, 1896, Nos. 21, 22, 23.

After pointing out the absolute necessity of abdominal section in cases of fixed retroflexion with ventrofixation to follow, and pointing out that ventral fixation is evidently called for when the abdomen has been opened for some condition over and above the retroflexion, Groosdeff gives cases of Alexander's operation, and of operations of a kindred nature.

The results of Alexander's operation speak for themselves. They show that the operation not only gives the uterus its true position, but also in a good percentage of cases its normal functions. It also convinces us that the position given to the uterus by shortening the round ligaments is a firm one, and is not destroyed by the sharp change in the size of the uterus during pregnancy, delivery, and the puerperium.

The intra-peritoneal operations for shortening the round ligaments were introduced by the American gynæcologists, Wylie, Baer, and Dudley. This operation was only done once, but the author thinks it capable of much more frequent application in cases of fixed retroflexion. When the retroflexion is mobile, Alexander's operation is to be preferred because of its safety. It is a different question when we reckon up *intra-peritoneal* shortening of the round ligaments with *suture of the uterus* to the *back of the bladder*. This combines all the advantages of Alexander's operation and of ventral fixation without including their disadvantages. It enables the operator, as in ventral fixation, to attack a case of fixed retroflexion even when complicated by disease of the uterine appendages; the uterus is fixed sufficiently near its normal position to guard against relapses, and at the same time it retains its mobility, thanks to which some of the disturbances sometimes met with after ventral fixation are excluded.

From his observations he comes to the following conclusions regarding operative treatment of retroflexion of the uterus by shortening the round ligaments.

(1) Alexander's operation should be limited to cases of mobile retroflexion where treatment by pessaries, massage, and other means has not sufficed; these cases should be either absolutely uncomplicated, or complicated only by such diseases of the uterine appendages as do not require abdominal section.

(2) In such cases Alexander's operation not only gives the uterus its normal position, but also re-establishes all its physical characters.

(3) The position thus regained is very durable.

(4) The disadvantages remarked by some authors are, as regards some of them, met with but rarely, and as regards others they may be avoided by increased experience in the technique.

(5) Intra-peritoneal shortening of the round ligaments, combined with fixation of the uterus to the bladder, may successfully replace ventrofixation.

Vaginal fixation.—Alexander's operation came upon the surgical world very gradually, and met with a very cold reception at first. Especially was this the case in Germany. Vaginal fixation, on the other hand, from the time of its introduction began to be used in a great number of cases, and it remains to be seen to what degree this operation has merited its sympathetic reception.

Schücking was the originator of the idea of vaginal fixation, and so rapidly was his operation taken up that within two years he collected statistics of 217 cases. Schwartz and Boldt were strong partisans. But when it was proved by experimenting upon dead bodies that it was absolutely impossible to avoid wounding the bladder the method was given up entirely, and the methods of Mackenrodt and Dührssen came in.

Mackenrodt's method first brought before the Berlin Society, May 27, 1892, consisted of the following steps: (1) drawing down the vaginal portion of the cervix with volsella; (2) marking the extent of the bladder; (3) making a transverse incision just below the bladder; (4) carrying a longitudinal incision from the centre of the first to the urethral meatus; (5) raising, on each side of the longitudinal incision, triangular flaps; (6) separation of the bladder from the uterus; (7) passing sutures above the level of the internal os, to fix the uterus to the bladder; (8) closure of vaginal incision.

He afterwards modified it by making a single longitudinal incision, dissecting the mucous membrane up from the bladder, then separating the bladder from the uterus

until the vesico-uterine fold of peritoneum was reached. This was not opened, but the peritoneum was caught in the two fixing sutures. These were passed transversely higher up the fundus and fixed this to the vaginal wall instead of to the bladder.

The relapses after this method were frequent. Winter had 14 cases which all relapsed. Küstner had 16 relapses in 25 cases. Finally Mackenrodt himself gave it up and became a warm supporter of the method of fixing the uterus to the bladder.

The first method of Dührssen was no better than Mackenrodt's and perhaps worse. The peritoneum was not opened, and consequently there was the possibility of injuring the bowels, and the number of relapses was great. Dührssen himself had thirty-two relapses in 147 cases or 22 per cent. Küstner had a greater percentage of relapses. Schauta has three in nine cases. Dührssen gave it up and took to opening the peritoneum. This method is as follows: a transverse incision is made and the bladder is separated from the uterus, the peritoneal fold is reached and opened, then the fundus uteri is pulled down into the wound, the fixation is done and the appendages may be inspected and if necessary, removed. The cervix is held back by a speculum, and the wound closed longitudinally.

The operation is an open one and hence danger of wounding the intestines or bladder is removed. The fixation is very firm and there are no relapses. Dührssen had one in 148 cases. Fixed cases of retroflexion can be operated upon and diseases of the appendages attacked.

This method has been extensively used and praised, but, latterly, it has been pointed out that it may cause great trouble in those who are liable to have more children.

Strassmann and Graefe published cases where Cæsarean section was necessary after vaginal fixation.

Dührssen noticed delayed labour in eleven cases.

Strassmann, Winter and Czempin consider that abortion is often induced by it.

If these facts are established, it will limit Dührssen's operation to retroflexion in women past child-bearing.

In the Kiel clinic fifty cases of vaginal fixation were performed, of these twenty-nine by Mackenrodt's method and twenty-one by Dührssen's.

Of the twenty-nine cases, twenty were between the ages of 20 and 40, seven between 40 and 50, and two over 50. The eldest was 61 and the youngest 21. Only one of them was unmarried. Of the married twenty-five had living children, three had not borne a child at term.

The recent cases were seven, the rest being of long duration. In every case the retroflexion was reducible. In seven cases it was uncomplicated with other diseases. In fifteen there was endometritis and in these cases the operation of curetting was done. In nine there was prolapse of the vaginal walls and various plastic operations were done for this. The sutures used were catgut and silkworm gut.

The fixation sutures were applied quite at or near the fundus uteri.

There was great trouble in separating the bladder in six cases. In one case the fundus was perforated by the sound (Orthmann's), and it was necessary to open the abdomen to close this perforation, and the vaginal wound was closed.

The after course in twenty-two was without any re-action. In seven there was fever.

The results were noted in sixteen cases and at intervals of from three months to over a year after the operation. In six there was complete recovery, physical and functional, five were improved, one was no better, and in four there was complete relapse.

These four were further treated by bladder fixation in three of them, and vaginal hysterectomy in the fourth. The percentage of relapses was thus twenty-five in the cases seen.

Professor Werth gave up Mackenrodt's method and took to Dührssen's method with opening of the peritoneal cavity.

It should be noted that there is little or no trouble in pregnancy and labour after Mackenrodt's procedure.

Dührssen's method was used in twenty-one cases, of these all were married, eighteen had born at full time and three had either been barren or miscarried. Their ages ran from 18 to 54, and 11 were between 30 and 40, nine were under 30.

The retroflexion was recent in four cases.

Two cases were of fixed retroflexion. All were complicated by some disease or other of the genital organs. Endometritis or metritis in twenty, in ten various degrees of cystocele and rectocele, four had disease of the uterine appendages.

The following adjunctory operations were performed.

Dilatation of cervix and curetting nineteen times.

Schröder's operation four times.

Amputation of the cervix once.

Posterior colporrhaphy and perinæorrhaphy fourteen times.

Anterior colporrhaphy eight.

Removal of uterine appendages two.

Removal of hæmorrhoids once.

The incision used was varied—longitudinal, transverse, or T shaped. The bladder is separated bluntly from vagina and uterus, and the peritoneum when reached is opened transversely. The fundus was either forced out of wound by sound or dragged out by volsella. Adhesions were separated if noticed, the adnexa inspected, and the fixation sutures passed three to five in number, and either vertically or transversely. The sutures were passed through vaginal wall, vesico-uterine peritoneum, uterine peritoneum, uterine muscle and peritoneum, then vesico-uterine peritoneum and vaginal wall again, thus the adhesion is purely peritoneal.

In one case the fundus of the uterus was sewn into the wound in the peritoneum. The vaginal wound was closed longitudinally.

The after-course was feverless in fourteen, in seven there was raised temperature. This great proportion of cases with temperature is no doubt due to the difficulty of rendering the vagina aseptic. In four of the seven there was marked

bladder trouble, one had thrombosis of the iliac vein. The results were good in all the cases.

In twelve cases, after from two to six months, the conditions were noted. Of these, seven were completely relieved of every trouble felt before the operation, the other five were relieved to a marked extent. In all the uterus retained firmly its position as fixed at the operation. One is at present pregnant.

The conclusions arrived at from the work in Kiel, and from published opinions are as follows :—

(1) The vaginal fixation by Mackenrodt's method is not advised on account of the large percentage of relapses met with after its use.

(2) The method of Dührssen with opening of the peritoneal cavity gives much more hopeful results.

(3) In addition to the above advantage the operation may be used in case of fixed retroflexions and in retroflexions complicated with disease of the uterine appendages.

(4) The disadvantages of this method are, first the facility of infection of the peritoneal cavity owing to the constant presence of infectious germs in the vagina and more important still, the danger of troubles during pregnancy and labour.

(5) For this reason this operation ought probably to be limited to cases of retroflexion in women who are past child-bearing.

FRED EDGE.

THE TREATMENT OF PARTIAL INCONTINENCE OF URINE IN WOMEN. By Prof. DELBET, *Archives de Gynécologie et de Tocologie*, July, 1896.

Prof. Delbet relates the case of a woman, aged 54, bronchitic, who was the subject of incontinence of urine and coughing. On careful examination Dr. Delbet noticed that the sub-urethral tissues were very thin, the anterior column of the vagina had disappeared and was replaced by

a double line of lateral tubercles, extending on each side along the anterior vaginal wall. There was no appearance of cicatrix.

Dr. Delbet regarded this as indicating that at some confinement a sub-mucous rupture of the circular fibres of the vagina had occurred along the median line in front, that the lateral tubercles were the cicatrices of the retracted fibres and that the partial incontinence of urine might be due to the want of support to the urethra occasioned by this laceration.

An incision was made along the anterior vaginal wall in the middle line; the mucous membrane dissected away on each side (without removal) so as to form a flap operation, exposing the ends of the retracted fibres. These were united by five sutures, and the anterior column of the vagina reformed. The immediate result was good, but two of the sutures gave way, and the trouble to some extent returned. A second operation was done later, the dissection was carried further on each side, and many points of suture were inserted.

On recovery from the second operation the result was perfect, and the patient had completely regained the power to hold her urine.

J. W. TAYLOR.

THE INDICATIONS FOR VAGINAL LAPAROTOMY AND ITS TECHNIC. By SIEFART. *Deutsche med. W'och.*, xxii., p. 462, 1896.

The principle of Professor Veit's method is to work through the parametrium instead of going on directly from the anterior fornix or opening Douglas' pouch at once. The vagina is detached from the portio by an anterior unilateral transverse incision, and the bladder is then separated from the cervix on that side on which the broad ligament is to be first divided, and the incision is continued round the portio to the median line behind. Without further

cutting a ligature is placed round the base of the broad ligament, including the artery, and the ligament is divided by the scissors. Douglas' pouch may be opened according to the accessibility of the broad ligament, either before the latter is ligatured, or after it is divided. The finger is then passed into the peritoneal cavity to decide how far the organs can be preserved. Siefert gives the details of seven operations to show that ovarian tumours in Douglas' pouch, myomata, exudations in the parametrium or peritoneum, or unilateral tubal disease, can be successfully dealt with in this way, and claims that as a conservative method it is particularly valuable, for it is only during the operation that one has to decide what must be removed.

DERMOID CYST OF THE OVARY. By Dr. SIMONS. *Mon. Schr. f. Geb. u. Gyn.*, iii. p. 322, 1896.

In a spinster of 28, an ovarian cyst on one side, and a pyo-salpinx on the other, with extensive attachments to a coil of intestine, were supposed, even in narcosis, to be a single tumour, and most probably a multilocular cystoma. Even after the abdomen and the sac were opened, the difficulty of inspection, and the peculiar character of the liquid contents of the dermoid, prevented any definite diagnosis until a bundle of hair, as large as two fists, had been removed. The cyst also contained a glandular body, which in form, colour, and consistence at once suggested a parotid gland. Simons remarks that so far as he is aware, such a large, definitely isolated, acinous, or rather complex tubular gland has never been found in an ovarian dermoid cyst. The patient's recovery was delayed by thrombosis of the crural vein, and an exudation in the pelvic connective tissue; she left the clinic at the end of two months.

HÆMORRHAGE IN OVARIAN CYSTS. By LÖHLEIN. *Deutsche med. Woch.*, xxii., p. 455, 1896.

Löhlein reports the following case of hæmorrhage after sudden pedicle-torsion during pregnancy. A powerful

woman of 33, in the sixth month of her third pregnancy, was suddenly seized after an awkward movement with severe pain in the left side of her abdomen. Two days later: frequent hiccough, the left side of the abdomen distended, dull on percussion and tender on pressure. Pulse 110, temperature 37·6°. Next day: vomiting, no discharge of flatus or fæces, pulse 124. Laparotomy, extirpation of an elastic blood tumour as large as a man's head, consisting of the tube distended, by clots and fluid blood, and as thick as a thumb, and the left ovary changed into an elastic blood sac with congested walls. The fragile pedicle was twisted twice from left to right. She died on the night of the fifth day, and it was found that under the influence of pre-menstrual congestion there had been copious hæmorrhage into a cyst which was evidently of rapid development.

Löhlein mentions another case of pre-menstrual hæmorrhage into an ovarian cyst, which recovered after collapse from the hæmorrhage and a successful laparotomy. In the largest cavity of the cyst were two litres of dark brown clotted blood; there was no torsion of the pedicle. In connection with these cases he draws attention to the danger of rough and protracted examinations in the pre-menstrual period.

ON THE RELATION OF THE BACTERIA OF THE FEMALE GENITAL CANAL TO ENDOMETRITIS. By Dr. SIGMUND GOTTSCHALK and Dr. ROBERT IMMERWAHR, of Berlin, *Arch. f. Gynækol.*, l., p. 406, 1896.

In 60 cases of endometritis corporis the secretion from the uterine cavity was, on the first examination, found to be free from bacteria in 20, and in 14 remained so. The fact that in the other 7 cases micro-organisms were subsequently discovered proves that germs can find their way into the uterus during uninterrupted intra-uterine treatment conducted with the greatest care. Of the 39 cases which gave positive results 7 disclosed staphylococci, and in 2 of these the discharge had an evil smell. Staphylococci were found

as a secondary result of acute gonorrhœal endometritis in 4 instances. It seems that after the subsidence of the acute stage of gonorrhœa the resistance of the endometrium to bacteria, especially to pyococci, is materially diminished, and it is possible that an extension of the inflammatory process towards the oviducts and peritoneum may be set up by such an invasion of staphylococci. Pathogenic micro-organisms, when present, are most commonly either some form of diplococcus, unusual bacilli, sarcinæ or yeast-fungus; they are, as a rule, more numerous in chronic catarrhal than in fungose endometritis; and if they have any etiological importance at all, it must be in the former. The number of germs generally diminishes during menstruation, perhaps because they are mechanically washed out by the blood stream. In two cases of endometritis exfoliativa no bacteria could be discovered, nor in a case of influenza could the specific bacillus be found in the sanguineous discharge from the uterus.

J. J. M.

THE FORMALIN METHOD FOR RAPID DIAGNOSIS OF
UTERINE SCRAPINGS. By Dr. CULLEN. *American
Journal of Obst.*, June, 1896.

Dr. T. S. Cullen, pathologist to the Johns Hopkins Hospital, Baltimore, reports a new method for the rapid hardening of tissues by means of a formalin solution. It seems to offer a means of confirming at once the diagnosis in suspected malignant cases. His method is as follows:—The specimen removed is at once frozen by carbonic acid or ether and cut; the frozen section is placed in 5 per cent. aqueous solution of formalin for three to five minutes; left in alcohol, 50 per cent., three minutes; absolute alcohol, one minute; washed out in water; stained in hæmatoxylin for two minutes; decolorized in acid alcohol; rinsed in water; stained with eosin; transferred to 95 per cent. of alcohol; passed through absolute alcohol, then through either creosote or oil of cloves, and mounted in Canada balsam. As

the blood is lost in frozen sections, Cullen suggests as a modification, to place the specimen at once into a 10 per cent. solution of formalin for thirty minutes to two hours, according to the size and character of the tissue, then freezing and cutting the sections, fixing them in alcohol, staining and mounting as before. In this latter way the blood is well preserved, although it does not stain very distinctly. These methods have had careful and thorough testings in the Johns Hopkins Hospital, and cases of such results are quoted. The value of being enabled to give, within a few hours, one may say, a definite opinion on the intra-uterine condition by any trustworthy examination of the scrapings makes this, or any other plan as ably offered, worthy of trial.

W. T.

OBSTETRICAL.

DIET IN CONTRACTED PELVES: A REVIEW OF THE ATTEMPTS TO OBVIATE THE DANGERS OF CONTRACTED PELVIS BY DIETING THE MOTHER. By FLORSCHUTZ (Coburg). *In. Dies Giessen*, 1895.

Formerly partial starvation to lessen the size of the child. Since 1889, Prochownick (Hamburg) has endeavoured to promulgate his method—that is, his rules as to the diet of pregnant women, by which the amount of nourishment, though modified, is not depreciated, impoverished in quantity, nor very much in quality. There have been twenty-nine cases already published, of which four (Einhart) were with induced labour. Among the first twenty-five there was only one definite failure; in all the others the children at birth were considerably under normal weight and with little fat. The author, therefore, insists that the method is one proper in obstetrics, and may in some cases obviate Cæsarian section for premature labour. He disapproves of the combination of this diet cure with the induction of premature labour, as Prochownick's moving principle.

i.e., continuance of the pregnancy to term and full development of the powers of resistance of the children, is thereby lost.

INJURIES TO THE CHILD DURING LABOUR; CEREBELLUM FORCED INTO THE PLEURAL CAVITY. By HIEBAUM. *Präg. Med. Woch.*, xxi. 5, 1896.

Podalic version having been resorted to on account of placenta previa in a II-para, during the eighth month, the child (1,380 grms. 39 c.m.), forcibly extracted by hand, could not be revived, and was found to have suffered a fracture of the occiput and of the vertebral column. On incision of the tentorium, nothing could be found of the cerebellum but quite a small fragment; the remainder was found suspended in the form of white particles like sand, in about 20 c.c. of bloody serous fluid in the left pleural cavity. This peculiar injury, which is unique, was no doubt due to the obstetric interference.

SEROTHERAPY. *D. M. W.*, No. 27, 1896, p. 432.

In France the serum treatment of diphtheria—always Rouse's serum—is generally believed in; nevertheless cases are from time to time reported (*S. M.*, 7-8, 1896) that gives one the impression that the injections have been injurious or even fatal, a view constantly opposed by those who make bacteriology their speciality. The diphtheria statistics of Paris for 1895 were extremely favourable, and it is interesting to compare with them the mortality from other infectious diseases (*J. de Méd.*, No. 4, 1896), which was less in all of them in 1895 than in 1894—typhus to the same extent as diphtheria; variola by a greater degree; measles not quite so much; scarlatina alone remained at the same level.

Opinions on Marmorek's antiseptococcic serum are by no means equally favourable. Chantemesse claims to have reduced therewith the fatality of erysipelas from 3·4 per cent. to 1 per cent.; but, from the great variability in the severity of

the cases, his experiments are not accepted as convincing. The treatment of puerperal fever with Marmorek's serum was on the order of the day at the Obstetric Congress, in Paris, in April. Charpentier reported on forty cases so treated, that he had collected from all the obstetric institutions in Paris, and of these forty seventeen were fatal; the great hope at first based on this method is therefore reduced to a very moderate amount.

Quite recently attempts have been made to ward off, by injections of Marmorek's serum, the complications of scarlet fever, which are now set down to the account of these bacilli, but without any success worth mentioning.

ENDOMETRITIS DECIDUA POLYPOSA ET AUBEROSA. By
BULIUS, *Munch. m. Woch.*, p. 537, 1896.

A primipara of 21 bore a dead child in February, 1895, and had continued discharge of blood for six weeks afterwards. She was then regular till September. In the beginning of December she had some hæmorrhage, and on the 7th, labour-like pains, with the expulsion of clots and shreds, including a fragment of decidua and an ovum surrounded by the reflexa. More decidua was removed by the curette, and she recovered. The case was no doubt one of hyperplasia of the decidua vera, which was expelled as an almost quadrangular patch, 6 c.m. broad and 11 c.m. long. On the inner foetal surface there were thickenings in the form of bosses and polypi, with more or less defined pedicle. Histologically Bulius remarks that the growth arose from the decidua cells of the compact or cellular layer, and that no growth of the glands had taken place except in the deepest layers. There was no ground for supposing the affection to be specific.

ON THE ULTIMATE RESULTS OF ECTOPIC PREGNANCY. By
Dr. PROCHOWNIE, Hamburg, *Wiener med. Wochens.*
xlv., pp. 1265, 1311, 1335, 1895.

The author has had, under his own observation, 120 pelvic hæmatomata, of which 78 were due to ectopic preg-

nancy, and 13 ectopic pregnancies without hæmatoma, including five cases punctured after v. Winckel's method, 5 of hæmorrhage into the peritoneal cavity, of which 2 died before operation, 2 cases prolonged into the later months, and one lithopædion. As regards the results of treatment in the first 4 months after conception, 86 cases are available.

Operation was resorted to at once in 31, and one of the three women with hæmorrhage into the peritoneal cavity died; none of the other 28 were lost. Of the 55 at first treated conservatively, 29 recovered spontaneously; in 12, symptoms of septic infection led to abdominal section, and 3 died. The remaining 14 were operated from the vagina, and 6 of them were infected, but certainly not in consequence of the operation. One woman died from rupture of an immense varix on the peritoneal surface of the hæmatoma.

Infection of the hæmatoma was due either to gonorrhœa, antecedent puerperal infection, or communication from the intestine. In one case it was the result of an injury to the bowel during puncture, and injection of morphia by v. Winckel's method. Recovery was three or four times as long in the successful cases of expectant treatment as in those operated on, and the complications after affections which followed primary were fewer than those after secondary operations, after which fistulæ and abdominal herniæ were not uncommon. The later results of conservative treatment were decidedly unfavourable; there were 14 cases of conception among 23 women operated on, not including those cases in which the adnexa on both sides were removed, compared with 13 among 38 women treated conservatively. Prochownie, though disappointed by the review of his results, is not prepared to abandon a prudent conservatism. Caution is especially requisite in the case of old women who have at any time suffered from gonorrhœal or puerperal infection, and in all cases the least sign of septic infection necessitates immediate interference.

ON THE VALUE OF PATHOLOGICAL ANATOMY IN DETERMINING THE PROGNOSIS OF EXTRA-UTERINE GESTATION.

By Dr. F. CHOTZEN, *Munch. med. Wchnschr.*, xliii., pp. 538 & 570, 1896.

After considering the various terminations of extra-uterine foetation as disclosed by operations, the author concludes that a large number result in an early cure, and a few of these come under observation during the later months; tubal pregnancies seldom persist for long, and it is most exceptional for them to go to term. The larger number rupture, and, as a rule, end in hæmatocele with absorption, and the majority are only detected in this condition; a lesser number lead to free hæmorrhage, and their chances are small; a few go on developing. The prognosis of secondary gestation, though it may end in various ways, is very doubtful; exceptionally, the development may go on to term. As a rule the more dangerous cases are detected, but the less serious ones remain unnoticed, and this disproportion has led to the unfavourable statistics.

A study of the material in the Munich Pathological Institute gave no positive result, or help to the author to get any nearer a solution of the question of the prognosis of extra-uterine pregnancy, but on theoretical grounds, and from the results of clinical observation, he concludes that in all cases in which the pregnancy is undoubtedly a tubal one, conservative treatment may be advised with a good conscience. He finds that the prognosis of extra-uterine pregnancy is by no means so serious as it has been esteemed, and declares that from deficient diagnosis only serious cases reach the hospitals, and that the statistics of conservative treatment are consequently too unfavourable. Having regard to the numerous favourable terminations, he considers the danger in individual cases not very great, and that he is quite justified in recommending an expectant method of treatment. Herein he is supported by the success of conservative methods, especially of the injection of morphia as

recommended by v. Winckel, which, when the foetus is still alive, is the first to be considered.

J. J. M.

CASE OF DOUBLE UTERUS AND VAGINA : SUCCESSIVE LEFT AND RIGHT PREGNANCY. *Archives de Gynécologie et de Tocologie*, July, 1896.

Dr. Consolas of Athens describes a case of double uterus and vagina, first recognised at the time of delivery.

The patient was 28 years of age, well formed, and a primipara. At this time the pregnancy was on the left side. A good examination was made, and the vagina found to be divided into two equal parts throughout its whole length by a moderately thick septum. Each vaginal passage was terminated by a well-formed cervix, that on the right being closed, that on the left dilated with the amniotic sac presenting through the external os.

The labour was simple, but assisted (during the periodical stage) by the application of forceps. The septum was not torn or divided but was to be clearly distinguished after convalescence. At a second pregnancy the right uterus was found to be its seat, the left uterus being empty. This confinement was also normal and the patient made a good convalescence.

J. W. TAYLOR.

NOTE ON A CASE OF RETENTION OF URINE IN A FŒTUS WITH PERMEABILITY OF THE CANAL OF THE URETHRA.

By Dr. O. SAINTRE, *Journal de Médecine de Paris*, July 12, 1896, page 332.

Mme. P., æt. 34 years, first menstruated at 13 years, always regular since, had a child six years ago, labour instrumental, child died at four months covered with a skin eruption. No syphilitic taint could be ascertained. She was, however, neuropathic as characterised by stammering, convulsive movements of the left side of the face and slight

hemi-anæsthesia of that side, which symptoms, however, had improved under a hydro-therapeutic treatment combined with bromides,

On February 1, 1896, she was found, upon examination to be about seven and a-half months pregnant. The fundus uteri could be felt between the umbilicus and the epigastrium, the foetal heart was easily heard, on the left side of the abdomen, the presentation was normal, the head being at the brim of the pelvis but not engaged. The cervix was long, soft and sufficiently patent to allow the introduction of the tip of the finger. The promontory of the sacrum projected and could easily be reached with the middle finger. Upon measurement, the antero-posterior diameter was found to be contracted to the extent of about $1\frac{1}{4}$ c.m. ($\frac{3}{8}$ of an inch), which explained the difficulty attending the first labour. In order to avoid the same trouble, it was proposed to induce premature labour, to which the patient assented, and three weeks after, considering the time suitable, a Farmer's dilating bag was introduced as far as the internal os, after the usual aseptic precautions and dilated to its maximum with carbolated glycerine. The labour pains soon appeared and progressed regularly, the dilated bag was expelled, and after eight hours of labour the head appeared at the vulva in the occipito-pubic position. But here commences the interesting part of this observation, the head had been expelled a few moments, the shoulders and the thorax had followed; but, at this stage, the body of the child remained fixed in the passage notwithstanding forcible traction practised to remove it. The idea of a monstrosity suggested itself, but an examination with the finger manifested the presence of an enlarged foetal abdomen slightly depressible on fluctuating. Tapping was believed to be indicated; but a last effort was resorted to to complete the delivery by traction which was fortunately successful.

The child, a female, was born alive, but stupefied and soon rallied. The abdomen of the child was greatly di-

tended from the pubis to the epigastrium in height and width, projecting on each side in the lumbar region, presenting everywhere evident fluctuation. The symptoms pointed to a case of ascites ; but, on the second day, the child had not yet passed any urine although a large quantity was voided the following night which caused the abdomen to become very flabby and subsequently a catheter was used and 155 grammes (over 5 ounces) of urine were extracted.

The child died the same evening. The autopsy showed the bladder to be flattened, lining the anterior wall of the abdominal cavity in almost all its extent, reaching the xyphoid cartilage above, and the flanks on each side. The urachus originated from the middle of the anterior wall of the bladder to extend to the umbilicus. The wall of the bladder was thinner, but its vascularity appeared normal. The ureters were enlarged, dilated and, at their narrowest point, did not have less than 6 or 8 millimeters (about $\frac{1}{4}$ of an inch) in diameter, their wall was thin and translucent. The kidneys and calices appeared normal to the naked eye. Retrograde catheterization of the urethra was made and as easily as the normal. The capacity of the bladder was not measured but would probably have been between 1,200 and 1,500 grammes (about 40 or 50 ounces). The other organs appeared healthy.

From the observation of this curious case arise the following questions :

(1) What should be the conduct of the accoucheur in a case of dystocia, due to a similar retention of urine in the foetus ?

When, in such a case, traction is unsuccessful in removing the retained foetus, a capillary tapping should be practised early, as near the pubis as possible, if the child is alive, but if the child is dead, the thoracic wall may be incised and the abdominal cavity reached with the finger or the trocar. Moreover, the memoir of Professor Depaul, read before the "Académie de Médecine," February 26, 1850, on "The Distention of the Bladder, and Retention of Urine in the Child

during Foetal Life, Studied as a Cause of Dystocia," may be consulted.

Professor DEPAUL considers that the bladder of the foetus mentioned in his memoir contained $2\frac{1}{2}$ litres (75 oz.) of urine, and that foetus was born at $6\frac{1}{2}$ months of foetal life. In a case reported by Professor Lefour of Bordeaux, the bladder contained 1,750 grns. ($52\frac{1}{2}$ oz.). In this latter case, as in the present one, the urethra was permeable. These, together with a similar observation made by Cornelli, seem to be the only cases to be found in medical literature.

(2) Why should such an accumulation of urine in a foetal bladder be retained when there is no imperforation of the urethra?

CORNELLI contends that the foetus never micturates in the amniotic cavity. But, as observed by Professor Lefour, although the placenta constitutes a powerful organ of elimination for the foetus, it is probable that the kidneys supply normally a small quantity of urine in intra-uterine life. Cases are not unfrequent where urine is found in the bladder at birth when there is imperforation of the urethra. If, under the influence of a cause difficult to determine, the urinary secretion becomes more abundant, there comes a time when the accumulation of the urine distends the bladder, so as to stimulate its contraction, and its consequent emptying into the amniotic sac.

It may be argued that, as the sphincter ani, during foetal life, overcomes the contractility of the muscular fibres of the intestines, so the vesical sphincter may triumph over the contractility of the muscular fibres of the bladder.

This may be the case with a moderate quantity of urine. but when that quantity attains, 1,000 1,200, 1,500 grammes or more, the urinary reservoir is distended to such an extent that the ureters themselves are dilated, how could this hypothesis be admitted, if we consider the power of contraction of the muscular fibres of the bladder, and how easily these overcome the vesical sphincter in the adult when a proportionally much smaller quantity of urine is present in the bladder.

If we reject this hypothesis, upon what other shall we explain this occurrence ?

In the course of his observations, Professor Lefour noted at the autopsy of his foetus that a considerable portion of the right half of the bladder was distinctly more dilated than the corresponding part on the opposite side, that the muscular coat at that point was thinner, not only owing to the greater distention of that portion, but also due to the scarcity and atrophy of the muscular fibres of that part. Moreover, the circulation on that side was very limited. An injection of a coagulable substance introduced through the two umbilical arteries, delineated clearly the arterial system showing a portion of the bladder, about one-third of the right antero-lateral surface, where the injection had not penetrated. At that point, the arterioles were completely obliterated and transformed into fibrous cords. M. Lefour concluded that these anomalies might have so altered the functional integrity of the organ as to contribute to its distension.

But in the present case, nothing analogous had been observed. The arterial system of the bladder had not been injected, but nothing abnormal could be detected by the naked eye. What was then the conclusion to be drawn ? The only hypothesis which appeared plausible was, that the vesical distension was due to paralysis of spinal origin. The hereditary history of the foetus did not disprove that conclusion.

M. Lutaud considered the case of M. Saintre very interesting, but doubted whether the foetus micturated during intra-uterine life. It would seem to him probable that it did not micturate, considering the numerous cases of urethral imperforation. The hypothesis of M. Saintre appeared very probable.

M. Ozenne did not share the opinion that the kidney does not act during intra-uterine life.

M. Olivier said that in 99 out of 100 labours, the elements of urine were found in the amniotic fluid, which would

prove that the kidney had acted and the foetus had mic-
turated.

M. Dagron also held that opinion.

P. Z. HEBERT.

“PUERPERAL HERPES.”

Under this title Dr. Lutaud describes five cases of acute pyrexia, occurring between the second and fifth days after confinement or abortion, in each of which the febrile attack terminated by an eruption of facial (usually labial) herpes.

In each case the febrile attack was ushered in by rigors, the pyrexia was severe, rising to 104° F. or 103° F., and in each case on the appearance of the herpes the patients rapidly recovered.

The writer draws attention to the disquieting nature of these symptoms, and their liability to be compared with those of grave septic infection, and suggests that when strict antiseptic precautions have been taken in the conduct of labour or abortion, and no local condition can be found to account for subsequent rigor and pyrexia, it may be well to remember that the explanation of these phenomena may, sometimes be found in the occurrence of the herpetic disorder which he has described. (*Ibid.*) W. T.

PREGNANCY WITH UNRUPTURED HYMEN. By GUERRARD.
Centralblatt für Gynäkologie.

Guerrard reports four cases. In two of these the hymen was perfect and delayed the second stage of labour. He made a crucial incision, and the delivery rapidly took place. The third case sought advice on account of severe pain in the vulvar region when seven months pregnant. She had been previously twice operated on for adhesion of the hymen, which was then still firm and impermeable. It was excised, and pregnancy was completed naturally. The fourth case, with a hymen which only admitted a hair, became pregnant. She aborted at the third month. Cause unknown.

F. F. S.

PUERPERAL PULMONARY THROMBOSIS WITH AN ILLUSTRATIVE CASE. By Dr. LAMOND LACKIE (*Edinburgh Med. Journal*, July, 1896.

Dr. Lackie's illustrative case is briefly as follows: A strong healthy woman, a primipara aged 26, was during the last few weeks of pregnancy troubled with considerable anasarca of lower limbs, necessitating a recumbent posture. The urine at no time contained the slightest indication of albuminuria. The confinement was normal, the loss during and after labour being noticeably small in quantity. She progressed uneventfully, and was allowed up on the eleventh day. On the twelfth day (the next day) she "walked from the bed towards an easy chair at the fireside, a distance of about 12 ft. Just as she reached the chair she exclaimed that she was dying, complained of excessive shortness of breath, and instantly collapsed on the floor." Though Dr. Lackie reached her within six minutes, she died two minutes after his arrival.

Post-mortem showed all the organs healthy and apparently aseptic, in pulmonary artery was found a "thrombus," white, dense and fibrinous, adherent especially to one side, and extending into both branches, and their ramifications on the surface of this clot was more recently coagulated blood. The right ventricle of the heart was also occupied by a recent dark purple clot. The oedema had quite disappeared, and there was no indication of peripheral thrombosis. Dr. Lackie considered the condition of pulmonary thrombosis to be the cause of death.

In discussing the question as to whether this was a case of embolism or primary thrombosis, Dr. Lackie reviews on the one hand Virchow's view, that primary thrombosis of the pulmonary arteries is a mechanical and physiological impossibility, and on the other that of Benjamin Hull, Barnes and others, that it is quite possible that spontaneous coagulation may occur in the smaller branches of the pulmonary artery, and that those cases of sudden death occurring before about the nineteenth day are due to pul-

monary thrombosis, while those after that time may be the result of embolism, as by then the peripheral thrombus may have begun to soften and break down.

The excess of fibrin in the blood during the puerperium—the effete material circulating in the blood after labour—and *post-partum* hæmorrhage appear to be predisposing causes; while exciting causes as exertion or mental emotion modify the circulation, and by temporarily retarding the blood current, favour an increase in the size of the thrombus.

Death generally occurs too suddenly for treatment, but when possible, the recumbent position, diffusible stimulants (such as ammonia) and inhalation of oxygen are recommended.

Dr. Lackie concludes that his own case was one of primary pulmonary thrombosis for the following reasons:—

(1) There were no symptoms or signs, before or after death, of peripheral thrombosis—neither in the extremities nor in the broad ligaments.

(2) The catastrophe occurred on the twelfth day, before there was time for any softening of a peripheral clot, had such existed.

(3) It occurred at the time when puerperal thrombosis supervenes, wherever the situation may be.

(4) The appearance and relations of the clot suggested that it had been formed *in situ*.

(5) The patient was a primipara.

F. F. S.

NOTES AND NEWS.

THE annual dinner of the Society was held on Thursday, October 29, at the Café Monico. Dr. CLEMENT GODSON (*the President*), was in the chair, and was supported by about seventy Fellows and their guests. Letters containing expressions of regret at not being able to be present were read from the Presidents of the Clinical, Harveian, Obstetrical, Pathological, and West London Medico-Chirurgical Societies, and from Dr. Routh (*a past President*) and others.

Among the guests who accepted, were the President of the Royal Medico Chirurgical Society; the President of the Medical Society; Dr. Cullingworth; Dr. William Duncan; Dr. Symonds Eccles (*ex-President* of the West London Medico-Chirurgical Society); Dr. Ernest Clarke (*ex-President* of the West Kent Medico-Chirurgical Society); Dr. Eastes; Dr. Percival White; Dr. Selwyn Harvey; Surgeon-Colonel Freyer; Dr. Tyson and others. While the list of Fellows included: Dr. Robert Barnes (*Honorary President*); Dr. Bantock; Mr. Jessett; Dr. Macnaughton Jones; Dr. Fancourt Barnes; Mr. Lawson Tait; Dr. Travers; Dr. Elder (Nottingham); Dr. Heywood Smith; Dr. R. T. Smith; Mr. O'Callaghan; Dr. Mansell Moullin; Dr. W. Armstrong (Buxton); Dr. Purcell; Dr. Bennett; Dr. Dudley Buxton; Dr. Sunderland; Dr. Colenso; Dr. J. W. Smyth; Dr. Cuffe; Dr. James Oliver; Dr. Pickett; Dr. Miller; Dr. E. T. Collins (Cardiff); Mr. R. H. Hodgson; Dr. Macpherson Lawrie (Weymouth); Dr. Fitzgerald (Folkestone); Mr. Dingle; Dr. Smart (Liverpool); Dr. Murray Leslie; Dr. Roe Carter; Dr. Arthur Galloway; Dr. Herbert; Dr. Gifford; Dr. Dutch; with Dr. Schacht and Dr. Shaw (*Secretaries*).

The dinner was excellently served, and a capital selection of music formed an eminently suitable setting to the speeches that followed. These were few in number, but were very well received, not only on account of the personality of the speakers, but because of their markedly cordial tone. Two points were made clear: firstly, that the British Gynæcological Society was in a flourishing con-

dition, doing good work, with a still increasing membership, and secondly, that its Fellows welcomed with satisfaction the presence and generous words of distinguished Fellows of other Societies.

After the loyal toasts the CHAIRMAN rose to propose that of "The Sister Societies." The British Gynæcological Society was, he said, a comparatively young Society, and naturally looked up to its seniors and desired to respect them, and to emulate them in all that was good. In having an annual dinner the oldest of the Societies—the Medical—had been imitated. Of that Society he had been a Fellow for upwards of twenty-six years, and he had dined at twenty-four of its annual dinners, to which he always looked forward with pleasure. That such dinners were good had, he thought, been proved by the fact of the Royal Medico-Chirurgical Society having held one on the previous evening, at which he had the privilege of attending as their President. He much regretted that the President of the Medico-Chirurgical Society, whose name he had hoped to associate with this toast, had been suddenly called away to a consultation. They were, however, fortunate in having the President of the Medical Society with them. The President of the Obstetrical Society sent a letter of regret, but his place was well filled by Dr. Cullingworth (the Chairman of the Board of Midwives), and also by Dr. William Duncan (one of its Vice-Presidents). There were also present the immediate past Presidents of the West London Medico-Chirurgical Society and the West Kent Medico-Chirurgical Society. He begged to accord them a hearty welcome and wished their Societies all prosperity. He would couple this toast with the name of the President of the Medical Society (Mr. Reginald Harrison), an old and esteemed friend, to whom they all looked up for his scientific work, his brilliant surgery and his amiable qualities.

The PRESIDENT of the Medical Society (Mr. Reginald Harrison), in replying, echoed the Chairman's regret at Dr. Dickinson's (the President of the Medico-Chirurgical Society) being unable to respond to that toast. He himself had been a President only a short time, but had found himself associated with a good many toasts in that time. He considered that such Societies did an enormous amount of good in elaborating and collating material throughout the world, and that their social elements and functions were also most valuable. He maintained that a Society without its annual dinner was like a body without a soul, and he congratulated the British Gynæcological Society upon its having such a successful

annual dinner. As a personal friend he could not sit down without congratulating the Society also on having a President so distinguished for his scientific and social qualities.

Dr. CULLINGWORTH next proposed the toast of the British Gynæcological Society. He said he felt it an honour to be called upon to propose what must be considered the principal toast of the evening. He believed the reason of his having been chosen for this duty was that, although not a Fellow of the Society, he was engaged in the same department of work, and was therefore familiar with the proceedings and more or less able to judge of their value. The position in which he found himself was nevertheless somewhat anomalous, seeing that he belonged to a select body, the members of which were popularly supposed to deprecate the existence of the British Gynæcological Society, and to offer up a nightly prayer for its painless extinction. Many of the Fellows of the older Society, however, were occasionally disposed to regard the younger Society with a certain amount of envy. If, for instance, a contributor came forward to advocate somewhat advanced views he was sure to meet, in the British Gynæcological Society, with a sympathetic hearing. Younger Societies had certain great advantages over the older ones. They were untrammelled by traditions, and were disposed to welcome rather than to resent new views. His hearers were aware that at the older Society there had been occasionally a disposition to oppose innovation somewhat severely. It was on such occasions that some of them were tempted to think with envy of the freer atmosphere and more receptive attitude of the sister Society.

Having been informed by the Secretaries that he would have to speak that evening, he had taken an opportunity of looking up the report of the inaugural meeting of the Society, and refreshing his memory with a re-perusal of it. At that meeting, Dr. Routh, whose absence they all regretted, stated the object of the new Society to be the promotion of a better knowledge of the diseases of women. Now that twelve years had passed, it was not inappropriate to look back and ascertain how far the objects of the founders had been carried out. The record of the Society's work was in its Journal, and was a record of which the Fellows had a right to be proud. He himself was in the habit of regularly reading the Society's proceedings, and found them both interesting and profitable.

In some of their discussions he had, as a visitor, been privileged to take a part. Those who had been present at the recent Jubilee celebration of the Pathological Society, and had heard the admirable

and eloquent sketch of the Society's history delivered on that occasion by the President, Mr. Butlin, would perhaps remember a remark made in the course of that address to the effect that he (Mr. Butlin) sometimes wondered whether societies had a life-cycle of rise, climax and fall like individuals and nations. No doubt, as a Society became older it had a tendency to become conservative, and it did it no harm to have a younger Society growing up beside it. Many of them were admirers of the writings of their late American *confrère*, Oliver Wendell Holmes, and some of them were no doubt aware that he (Dr. Cullingworth) had a special love for them. There was a passage in one of his books, "The Professor at the Breakfast Table," that, although no doubt it had reference more particularly to religious beliefs, applied equally to scientific beliefs. "Smith," he says, "is always a Smithite. He takes in exactly Smith's-worth of knowledge, Smith's-worth of truth, of beauty, of divinity. And Brown has from time immemorial been trying to burn him, to excommunicate him, to anonymous-article him, because he did not take in Brown's-worth of knowledge, truth, beauty, divinity. He cannot do it any more than a pint pot can hold a quart, or a quart pot be filled by a pint. Iron is essentially the same everywhere and always, but the sulphate of iron is never the same as the carbonate of iron. Truth is invariable; but the Smithate of truth must always differ from the Brownate of truth." He (Dr. Cullingworth) had often found that passage, and the lesson it conveyed, helpful to him. It had enabled him not unfrequently to take a more tolerant view than he might otherwise have been disposed to do of the work and opinions of those who differed from him. It was necessary for everyone to be reminded from time to time that to differ in opinion was not to be guilty of a moral fault. He was glad to have such an opportunity of acknowledging the personal courtesy he had received from the President and many of the leading Fellows of the British Gynaecological Society. He had been lately, and was still, passing through one of those trying and painful ordeals to which all of them were liable, and he should never forget the sympathy and help he had experienced from his professional brethren. He should preserve amongst his valued treasures a sympathetic and brotherly letter he had received from the President in regard to the matter to which he had referred. He could not allude to personal topics without a reference to his friend, Dr. Leith Napier, who had, as editor of the Journal, worked hard and well for the Society, and whose departure for Australia had

deprived it of one of its most active Fellows. He himself missed Dr. Napier generally. It gave him much pleasure to propose the health of the British Gynæcological Society, and to couple with the toast the name of his good friend and host, the President.

The PRESIDENT, in reply, said that the British Gynæcological Society was instituted eleven years ago. It was thought by its founders that there was ample room for a Gynæcological Society. Considering the enormous strides that had been made in gynæcology since the foundation of the Society he thought the result had fully justified this opinion; the Society never was in a more flourishing condition than it was now. It continued to have a large accession of Fellows to its ranks. The last printed list contained the names of between 490 and 500 ordinary Fellows, and that was printed in 1895. This Society was formed on very different lines to the Obstetrical Society. It had a wider scope; it was not a Society of London: it was a Society of Great Britain; it did not confine its presidents to London, but selected for this office occasionally physicians and surgeons holding the highest position as exponents and practitioners of gynæcology, not only in the large towns of England but in those of Scotland and Ireland. Also it did not confine its meetings to London. There was a bye-law that read, "The Council shall have power to arrange for meetings of the Society in the large towns of Great Britain on such occasions as they may think fit." Then there was the Journal of the Society, a very valuable periodical, published quarterly, containing not only the proceedings of the Society, but original papers, reviews, reports of other Societies, and a summary of gynæcology, including obstetrics and pædiatrics, collected from all parts of the world. This was now very creditably edited by their senior Secretary, Dr. Schacht, since Dr. Leith Napier left London; and he understood from Dr. Schacht that he has received many promises of original papers from some of the most eminent continental gynæcologists. These were reasons, he thought, for upholding that there was room for the British Gynæcological as well as the Obstetrical Society, and that they would do well to belong to both. At the International Congress of Obstetrics and Gynæcology held at Geneva this autumn, the British Gynæcological Society was well represented. Dr. Bantock, as one of the *rapporteurs*, opened the discussion on the best method of closing the abdominal wound, and he himself was favoured by being elected one of its Honorary Presidents, he doubted not in consequence of the position he held in that Society. He had seen Dr. Cordes a few days since at Geneva,

and been told by him how gladly they had welcomed that Society's Fellows, and how sorry he (Dr. Cordes) was to be unable to be present at that dinner, as he was last year ; but he sent instead all his best wishes for the prosperity of the Society.

Dr. MACNAUGHTON JONES, in introducing the next toast, viz., that of "The Guests," quoted the eminent French statesman, who said that he "did not believe in politics fomented over cups." The same might be said, with truth, of many other matters besides politics. Paradoxical as was that position in which the post-prandial orator often found himself placed, there were occasional exceptions, when the speaker felt in thorough accord with the toast allotted to him to propose, and where he could really say what he meant and felt. Such, fortunately, was his lot to-night. He had to convey to their guests the cordial welcome of the Fellows of the Gynæcological Society, and this afforded him the greatest pleasure. One of these distinguished visitors had already been eulogistically referred to by the President. It was no flattery to say that Dr. Cullingworth had risen to the position he occupied in obstetrics and gynæcology through his operative skill and scientific research, and not for these qualities alone, but for that liberality of thought and action for which he was noted, a quality far too seldom found in many of the leaders of medicine. The Obstetrical Society, to which Dr. Cullingworth had referred, was a twin with the Gynæcological—in fact, a Siamese twin, indissolubly linked with it in a morphological and physiological bond of union. It was true in this case, as had been said, that the Obstetrical Society was the elder of these twins, but then it might be looked on in the light of the Gynæcological Society being one of the longest cases of super-foetation on record. Personally, he would be pleased to see the two Societies working together in harmony. Especially to-night should they extend to Dr. Cullingworth their heartfelt sympathy, while he was passing through that trying ordeal of which he had spoken. No one in that room was better qualified to hold out that hand of sympathy than he (Dr. Macnaughton Jones). Many years since, in a remarkable and well-known case, he had successfully defended himself for over a week against a somewhat similar attack, and it was sufficient to say that at its close the *Lancet* had devoted several leading columns to the case, congratulating him on the issue, and in defence of the action he had taken. There could not be two laws—one for the profession and another for the public. A surgeon was often like one treading with bare feet a path strewn with glassy fragments. He had no law to

guide him but that of duty. He must be determined to "act the law he lives by without fear; and, because right is right, to follow right, even in the scorn of consequence." The knowledge of such sympathy and such devotion to duty were the things on which Dr. Cullingworth might, with safety, rely. Another distinguished visitor, Mr. Reginald Harrison, unquestionably one of the heads of that department of surgery which he practised, was a proof of the liberality and courtesy which London surgeons extended to their provincial brethren who came to work amongst them. Surgeon Colonel Freyer, who was now in the same hospital as Mr. Reginald Harrison, was another guest whose name was a household word in India. Mr. Eastes, the Treasurer of the Annual Meeting of the British Medical Association held in 1895, and of the Metropolitan Counties Branch, they should be particularly pleased to include in this toast, through the recollection of that unexpected cheque they had received some time after the conclusion of the Meeting. Dr. William Duncan, with whose name he would couple the toast of "The Visitors," the Gynæcological Society generally recognised as the one who had been the first to bring the performance of some, now generally received, surgical procedures before the Obstetrical Society. As another representative Fellow of that Society, he was pleased to see him present, and he desired to convey to him, and to the other visitors whose names had been mentioned by the President, the pleasure it afforded the Fellows of the Gynæcological Society to welcome them as guests.

Dr. WILLIAM DUNCAN had great pleasure in thanking the Society on behalf of the guests for the opportunity afforded them of being present at that dinner. He congratulated the Society upon its success and development, and thought it would be an excellent thing for all gynæcologists to join both the special Societies.

In proposing the toast of "The President," Mr. F. BOWREMAN JESSETT said that that was the last toast on the card, but he believed that it would not be the last of the evening; there were other gentlemen holding important offices in the Society, upon whom the bulk of the work really devolved, and he (Mr. Jessett) was quite sure that a toast would follow that one, wishing them health to continue the duties they had hitherto so ably performed. In proposing that particular toast, however, Mr. Jessett observed that every Society or body must have a head, a man with an even mind, a strong and equitable man. They as a Society could safely say that they possessed such a man in their President. That was the first

occasion on which a President had been unanimously asked to accept office for a second year, and, notwithstanding the numerous arduous duties everybody knew their President had to undertake outside that Society, he, ever having the interests of the Society at heart, most generously accepted office for a second year, since it appeared to be the opinion of the Fellows of the Society that it would be to its benefit that he should do so.

Their President had said that the Society numbered some 500 Fellows. During the first year of office of that President no less than between 70 and 80 new Fellows were elected to the Society, and during the present year some 50 more had joined their ranks—a large number of these joined, no doubt, through the personal influence of their President.

It was this large accession to their ranks and the capital attendance at the meetings which influenced the Council to approach Dr. Clement Godson with a view of obtaining his sanction to allow himself to be nominated a second time. The Society, as a body, had unanimously endorsed the suggestion of their Council. There was much to be said as to the peculiar qualities which were embodied in their President, his *sang froid*, his aptitude for business, for making friends wherever he went, and numerous other good qualities, which at this late time of the evening it would be out of place to enter into; he would, therefore, merely ask them all to drink the President's health and prosperity, upstanding and with three times three.

The PRESIDENT thanked Mr. Jessett and the Society for the kind reception they had given him. He had done his best while in the chair, and was glad to have met with their approval.

The proceedings closed with a vote of thanks to the Secretaries, proposed by Dr. Bantock.

THE BRITISH

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W. H. CHRISTOPHER NEWMAN, M.A., M.D. Cantab., Canon, Bristol; Herbert Snow, M.D. Lond., London, W.

The following gentlemen were proposed for election :—
Wm. Edward Green, M.R.C.S., Sandown, Isle of Wight;
C. R. Martin, L.R.C.P. and S.E., Eaton Terrace, S.W.;
R. Isa Mattice, M.D. McGill, L.R.C.P. Lond., Nebraska,

U.S.A. ; Wm. Francis Grant, M.D.Ed., Mile End Road, E. ; Lysander Maybury, M.D., Southsea ; Surg.-Major Alick Burke, M.D., R.U.I., Woolwich ; Wm. Henry Hobson, M.R.C.S., Great Berkhamstead.

SPECIMENS.

- (1) HÆMATO-METRA AND HÆMATO-SALPINX DUE TO ATRESIA OF THE VAGINA—ABDOMINAL HYSTERECTOMY WITH SUTURE OF THE UTERINE STUMP TO THE ABDOMINAL WALL.
- (2) A TROCAR DILATOR FOR THE EVACUATION OF PELVIC ABSCESES.
- (3) WOODEN PROBES FOR MAKING INTRA-UTERINE APPLIANCES AFTER CURETTING.

By CHRISTOPHER MARTIN, M.B., F.R.C.S.Eng., Surgeon to the Birmingham and Midland Hospital for Women.

- (1) HÆMATO-METRA AND HÆMATO-SALPINX DUE TO ATRESIA OF THE VAGINA—ABDOMINAL HYSTERECTOMY WITH SUTURE OF THE UTERINE STUMP TO THE ABDOMINAL WALL.

The patient was aged 19, and was single. She came complaining of (1) a steadily increasing tumour in the abdomen ; (2) of severe colicky pain in the abdomen ; and (3) of total absence of menstruation. Although she had never menstruated, she had had, since the age of 16, monthly attacks of abdominal pain, and for nearly twelve months she had noticed a tumour, which month by month grew larger, rising out of the pelvis.

On examination Mr. Martin found the vulva normal and the hymen normal, but the vagina ended blindly one inch above the hymen, the anterior and posterior walls fusing together. On passing a sound into the bladder and a forefinger into the rectum, it was evident that bladder and rectum came into contact above this point of

fusion for three inches. Above this, high up, there could be felt by the finger in the rectum the lower pole of a large cystic swelling.

On examining the abdomen this same swelling could be felt rising up to the level of the umbilicus. It had many of the physical characteristics of a gravid uterus: it was a pear-shaped median cystic swelling, which contracted intermittently; on auscultation, a bruit could be heard over it. Above and to the left of this mass was a second one about the size of a man's closed fist and freely mobile. It could be pushed up into the left renal region and down into the left iliac fossa, and physically resembled a movable left kidney. No obvious connection could be made out between this mass and the tumour rising out of the pelvis. To the right of the median tumour was a similar smaller mass about the size of a hen's egg.

Mr. Martin opened the abdomen, and found, as he expected, that the median tumour was the uterus distended with menstrual blood. It was quite as large as the uterus at the sixth month of pregnancy. The masses on either side proved to be Fallopian tubes distended with blood (*hæmato-salpinx*). That on the left side was distended at its abdominal end into a globular mass four inches in diameter, and connected to the uterus by a very long pedicle.

The upper fourth of the vagina was also distended with retained menstrual blood (*hæmato-colpos*). Mr. Martin first incised the uterus in the middle line and evacuated a large quantity of thick treacley blood. The cavity was then irrigated and sponged out so as to remove all the thick glairy fluid that remained. The broad ligaments were ligatured (external to the ovaries and tubes) and divided as in abdominal panhysterectomy. The uterine arteries coursing up the lateral borders of the uterus were then tied on each side. Having thus controlled the circulation in the uterus, it was amputated by a horizontal incision at the level of the internal os, and removed together with both ovaries and tubes.

There still remained in the wound the cervix (widely dilated) leading into the dilated portion of the upper end of the vagina. As it was evident that this could not safely be extirpated, it was decided to drain it through the abdominal incision. Accordingly the cervix was fixed by eight silkworm gut sutures into the lower angle of the incision, the internal os being flush with the level of the skin. The sutures were passed in such a way as to securely shut off the peritoneal cavity. Each passed through the abdominal wall from skin to peritoneum, then through the peritoneum and muscular substance of the cervical wall, and then back through the abdominal wall from peritoneum to skin, and emerging half an inch from the point of entrance. A glass drainage tube was passed through the gaping cervix down to the bottom of the sac, and the rest of the abdominal wound closed in the ordinary way.

The patient made an excellent recovery. There was no shock and no untoward symptoms during convalescence. The cervical canal now opens at the lower end of the cicatrix by a small mucous fistula. This exudes a little glairy mucus, but does not in any way trouble the patient.

Mr. Martin expressed his great indebtedness to Mr. J. W. Taylor (who suggested to him the above method of treating the stump), and to Mr. Jordan and Dr. Edge, who ably assisted him during the operation.

(2) A TROCAR DILATOR FOR THE EVACUATION OF
PELVIC ABSCESES.

This instrument consisted of (1) an ordinary sharp trocar, and (2) a canula which was so constructed that it could be made to dilate the channel made. This canula consisted of two strong grooved blades, placed with the grooves in opposition, so that when closed they formed a perfect tube. The handle of the instrument was constructed on the plan of Spencer Wells' long

abdominal forceps. The instrument with the trocar *in situ* was to be introduced into the abscess, and the trocar was to be withdrawn; then, if pus flowed, the handles of the instrument were forced apart in order to widely separate the two hollow blades which formed the canula. Before withdrawing the blades a piece of drainage tube was to be introduced between them into the cavity. The opened canula was then withdrawn and the operation was completed. This was practically "Hilton's method" applied to pelvic abscess.

(3) WOODEN PROBES FOR MAKING INTRA-UTERINE APPLIANCES AFTER CURETTING.

The wooden probes were those which he used in place of Playfair's probes, after curetting the uterus. They were simply straight slender rods of beech-wood, ten inches in length, and used largely in the bamboo furniture trade under the name of "dowels." They were round and smooth and of uniform thickness. They were easily sterilised by boiling or steaming, and when wet took the wool perfectly. A special point in their favour was that they were so cheap (nine a penny) that they could be thrown away after each operation. This was very important, and greatly diminished the risk of carrying septic infection from one case of curetting to the next.

Dr. HEYWOOD SMITH asked what was the thickness between the external and internal pouch of the vagina; he thought it might be an advantage in such a case to dissect up to the distended sac from below, and then remove by coeliotomy the distended tube, leaving the uterus and one tube and ovary.

Mr. SKENE KEITH said that, when in New York, he had seen a similar case similarly treated. The patient was operated on by Gaillard Thomas, and it was found that the distension occurred in one-half of a double uterus. He

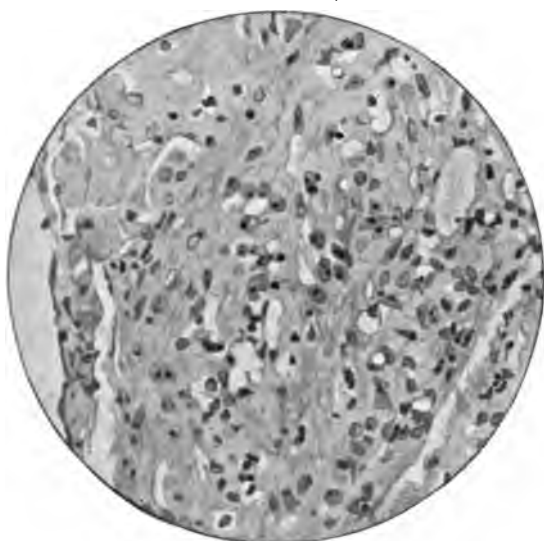
believed it was treated by being stitched to the abdominal wall, but no sac was removed.

Dr. PURCELL did not see why the stump should have been brought up to the abdominal wall; he thought it would have been better to make it an intra-peritoneal operation, provided free drainage could have been secured down through the os and vagina.

Dr. GRANVILLE BANTOCK observed that the case seemed to be unique, and therefore laid down no rule for the treatment of menstrual retention. As a rule such cases were better treated by restoring the natural passage. But here it was a fortunate thing that the condition was attacked through the abdomen; had it been undertaken through the vagina, the cyst would have been left behind. He thought Mr. Martin had done quite the best thing in the case, though there was the difficulty that a sinus lined by mucous membrane was left behind.

Dr. SHAW suggested that it might have been possible to establish a communication between the uterus and vagina by means of the canula which Mr. Martin had shown them.

Mr. MARTIN, in reply, said this was the seventh case he had had of menstrual retention, the other six of which he had lately published in the *British Medical Journal*. In one case there was tubal distension; he first opened through the vagina, and the tubes became septic, with a fatal result. In another case he opened the abdomen at once and the patient recovered. With reference to Dr. Heywood Smith's remarks, he thought that when the vagina was absent, and the genital organs were disorganised, as they were in these cases, it was better for the patient that she should not have an ovary left. Here three inches of dissection would have been necessary to reach the collection from below, and it would have been very difficult to keep the passage open. That was why he opened the abdomen and removed the uterus and appendages. Intra-peritoneal treatment of the stump would have been absolute folly.



J. H. Targett.

MIXED CELLED SARCOMA OF THE BLADDER.

because there was a vaginal sac below the uterus which would certainly have become the seat of suppuration. The patient still had a sinus, with a little mucous discharge, but it caused her no inconvenience. If he had used the trocar, as suggested by Dr. Shaw, he might have injured the bladder or rectum; dissection from below would be preferable to that.

MIXED-CELL SARCOMA OF THE BLADDER.

By H. MACNAUGHTON-JONES, M.D., F.R.C.S.Ed. & I.

The portions of tumour shown were removed from the bladder. The patient had suffered for some time from symptoms of cystitis, and for the last three months from severe hæmaturia. She had been treated on the Continent for cystitis. After her return home, the growth was first discovered *per vaginam*. It was located in the immediate neighbourhood of the neck of the bladder, and occupied the base and posterior wall of the viscus. Particles brought away after exploring and washing out the bladder did not, on microscopical examination, throw light on the exact nature of the growth. It was determined to dilate the urethra and remove it. This was done satisfactorily, and no bleeding occurred subsequent to the operation. Unfortunately, septic symptoms set in, followed by suppression of urine, death occurring on the sixth day after operation.

Pathological Report on the Growth by Mr. J. H. Targett.

"This tumour may fairly be described as a mixed-cell sarcoma, the round and oval shapes predominating, and the short spindles being in less abundance. It is very vascular, and the vessels are mostly of the thin-walled type characteristic of sarcomata. The surface of the tumour is covered with granular matter due to ulceration and sloughing of the sarcomatous tissue. In consequence there are evidences of diffused inflammation in the growth immediately subjacent to the necrotic layer, and these inflammatory changes com-

plicate the structure of the tumour throughout the microscopic section. Several giant-cells are to be seen in every section, but they are not numerous enough to call the growth 'myeloid.' Such giant-cells are not uncommon in rapidly-growing sarcomata. To the naked eye the specimen had a nodular or bossy outline, but did not appear to be covered with mucous membrane, as is usual when sarcomata bulge into the cavity of the bladder."

- (1) PAPILLATE FIBROMA OF CERVIX UTERI. (2) TUBAL GESTATION — LAPAROTOMY. By W. D. SPANTON, F.R.C.S., Hanley.

(1) PAPILLATE FIBROMA OF CERVIX UTERI.

Mrs. R., age 63, sent to me by Dr. Parkes, August 31, 1896, healthy looking, had had a large family and difficult labours. Uterus was prolapsed and os covered with papillate growths with a hard eroded base. Os uteri patulous, bleeding readily where eroded. She suffered great discomfort, so I excised the cervix. The microscopical section made by Dr. King Alcock longitudinally through one of the main papillæ shows thus (card). The walls are fibrous and the cysts are lined with flat epithelium. The cutaneous surface is normal, with no trace of epithelial in- or out-growth. The specimen is of interest in connection with the question of malignancy—some of the naked eye appearances pointing to it, while the microscopic report shows none.

(2) TUBAL GESTATION.

Miss L., age 25, sent to me by Dr. Johnson, June 10, 1896, a healthy young countrywoman. Catamenia were perfectly regular up to beginning of March. In April she had an attack of "ovaritis" with faintness, and since that metrorrhagia more or less constant. She had much pain in right side and about pelvis. Uterus felt normal. To right of it and behind, a hard mass was felt firmly

connected with it, which was diagnosed as either a myoma or an extra-uterine gestation. Operation performed in the ordinary way. I found the mass densely adherent to uterus, the right ovary closely connected and also adherent. The whole was removed, and the patient made a rapid recovery. The specimen seems to show an apoplectic ovum, constituting a tubal abortion. How it came there is the mystery.

The PRESIDENT asked whether there was any bleeding on touching the cervix in the first case? (Mr. Spanton: Yes.) This was a point which always raised the suspicion of malignancy.

Dr. HEYWOOD SMITH thought the first case seemed analogous to a hydatid form of growth; such growths might attain a large size, and yet not be malignant.

Dr. SCHACHT suggested that the second specimen should be referred to the Standing Committee for further examination; for there were only three or four such cases on record, and it would be useful to have this one for reference.

Mr. Spanton assenting, the President referred the specimen to the Committee mentioned, with the addition of Mr. Spanton.

THE LATENT GOUT OF THE MENOPAUSE.

By WM. ARMSTRONG, M.R.C.S., J.P., Buxton.

The frequent, indeed almost constant, association of certain clinical phenomena with the many troublesome symptoms (more especially nervous and mental) which make their appearance at the climacteric period is, I venture to think, therapeutically suggestive. I have carefully watched a considerable number of patients who, at the approach of the change of life, have developed some or other of the following symptoms:—

(1) Increasing stoutness, with flabbiness of the muscular system.

- (2) Puffiness of hands and feet.
- (3) Lethargy, both mental and bodily.
- (4) Shortness of breath, on exertion, with cardiac debility.
- (5) Irritability and restlessness.
- (6) Broken and disturbed sleep.
- (7) General stiffness and feeling of weariness on rising in the morning.
- (8) Dyspepsia, flatulence, and constipation.
- (9) Migraine.
- (10) Various neuralgiæ, especially of back of head and neck.
- (11) Lumbago and vague muscular pains.

In almost all these cases I have found that the amount of urine passed is below the normal quantity, excepting from time to time when, especially after a marked nervous exacerbation, a large quantity of abnormally clear water of low specific gravity is voided. The ordinary urine often contains urates and almost always uric acid in excess, and is of a specific gravity above the normal. I had long clung to the idea—I believe by no means uncommon—that these disturbances at the change of life were simply associated with nervous derangement, which could only be combated by such remedies as the bromides, valerian, and drugs of that class. But it slowly dawned upon me that as so many of the symptoms named were present in persons suffering from the so-called “neurotic” forms of gout, possibly treatment carried out somewhat on the lines found useful in that complaint might be successful. The results have so far exceeded my expectations, and the relief given has been so marked, that when your secretaries asked me to read a paper before this Society I thought it might be of interest if I said a few words on the subject.

The generally admitted fact that disturbance of the balance of the nervous system by worry, anxiety, injury, &c., is apt to cause increased goutiness, and sometimes even an acute attack of that disease, coupled with the very copious supply of sympathetic nerve filaments to the

ovaries and uterus, gives, I consider, the keynote to this question. The functions of digestion and assimilation, and the various metabolic changes are so largely under the control of the nerve centres, that nothing seems to me more likely than that so great a disturbance of that system as takes place at the menopause should cause secondary derangement of those most important functions.

That being so, it next follows that the blood becomes loaded with waste products, and the usual symptoms follow. Many of these patients scorn the very idea of gout, as they say, and truly, that they eat but little, and that they are most temperate in the use of alcohol; but we must not forget that they have arrived at an age when they take, as a rule, comparatively little exercise, and as they are often putting on flesh somewhat rapidly, they become less and less inclined for exertion. In many cases the patient gets stouter and stouter, but weaker and weaker; while the urates become more constant, and the uric acid more excessive. The treatment of this condition, if it is to be successful, must be carried out with care and discretion; each case must be taken as a unit and the details of the treatment modified accordingly.

But certain general indications may be laid down, and they seem to me to be as follows :—

(1) To eliminate the waste products from the blood :
(a) by the kidneys; (b) by the liver and bowels; (c) by the skin.

(2) To disturb and disperse the morbid products stored in the lymph spaces, lymphatics, and muscles.

(3) To improve the state of the nervous system, more especially of its sympathetic portion.

I feel convinced that women, as a rule, drink far too little fluid, and that what they do drink is taken at the wrong time, viz., with food; this destroys the salivary digestion and dilutes the gastric juice (probably already deficient both in quantity and quality through failure of nerve supply), and thus lays up a still further heritage of trouble.

For flushing out the kidneys and liver I know of no simpler or better remedy than the drinking of a tumblerful of very hot water, in sips, every morning fasting, and every night at bedtime, and also, in the more obstinate cases, one hour before each meal. This may be supplemented in many cases by the addition of a large teaspoonful of an effervescing powder, composed of the sulphates of soda and potash, sod. chlorid., sod. bic., and tartaric acid to the early morning draught of hot water; this helps to unload the portal and intestinal circulation, and thus to assist the more ready removal of any congestion present in the pelvic organs. For the hot water may be substituted any natural thermal water. I use mainly the Buxton thermal water, the nitrogen gas contained in which seems to have a specific effect in increasing the elimination of uric acid, as well as in largely augmenting the flow of urine. To this, as it has no action upon the liver, I am in the habit of adding the effervescing salt just mentioned.

The skin is the most important organ of elimination, and by means of its millions of pores gets rid of much waste material; and of all remedies, I am convinced that I have seen the greatest immediate relief from the box vapour bath. I am sure that this is less trying (as the head is free) and more effective than either the Turkish or Russian baths. By using the combined vapour and mineral water baths, excellent results are obtained; the former is given at a temperature of 110° to 115° for eight to twelve minutes, and is immediately followed by a warm mineral bath at 97° or 98° for five minutes. Relief is often at once apparent, patients constantly saying that a great load has been taken off them. Certain precautions require to be taken when cardiac debility is present. I often order a dose of spt. ammon. arom. ʒss. to ʒj. in water just before the bath; the feet are always placed in a foot-bath of hot water, and the head is encircled by a cold compress. In giving a course of such baths three may be taken each week for two or three weeks, but if they are spread over a few months, two during the first week and

one per week afterwards are sufficient. It is most important that the patient should rest in a recumbent position for at least one hour after each bath.

The second indication, viz., the disturbance and dispersion of the morbid products locked up in the lymph spaces, lymphatics, and muscles, is also most important.

There can be no doubt that there is much lymph stasis in these cases. It has been well said that the muscles are the hearts of the lymphatic system ; and as these muscles are so often flabby and fatty, the emptying of the lymph spaces and the propulsion of the lymph are but imperfectly carried out. Massage, given either wet or dry, carries out these processes mechanically, and acting also as an excellent nervine tonic, its use seems expressly indicated.

When using the combined vapour and mineral water baths, it is my custom to order massage in the dry form on alternate days, frequently adding the faradic current, and using the hand of the masseuse as the labile electrode, in a manner and for a reason which I will explain presently.

Where the vapour bath is not required, or is contra-indicated, wet massage, either in the form of the Aix douche, or in the reclining position followed by the douche, is often of great service. The douche, which is given in the direction of the lymph stream, acts as a potent form of massage, as well as having a powerful effect on the nervous system.

The peat-mud baths are also often useful ; these are given at a temperature of from 102° to 110°, and the patient remains in them for from twenty to sixty minutes as prescribed. In addition to the effects of the heat, which brings the pores of the skin into action, the peat-mud has specific properties ; that in use at Buxton (obtained from the elevated moorlands near the celebrated "Cat and Fiddle") is exceptionally rich both in salts and iron, and in the more debilitated cases it seems to have a specially happy effect.

The *resisted* Swedish exercises are of service in those

cases where all bathing is contra-indicated. Their extensive and effective use in cardiac troubles has shown that they have a powerful influence both on the nervous and on the muscular systems; there is, therefore, a special reason for their use in the class of case we are discussing. Mainly through the "resistance," they not only cause increased contraction of the muscles with emptying of the fluid contents, but also carry a series of impressions to the nerve centres, causing them to exercise their functions with increased vigour and accuracy.

The third indication is fulfilled in part by some of the methods previously mentioned, but the most potent agent in this connection is the use of electro-massage; this is carried out by applying a large pad connected with one pole of a faradic battery to the feet, or lower part of spine, of the patient, the other pole being attached to a wristlet on the hand of the operator; thus the hand of the masseuse becomes the labile electrode, and massage, more especially in the form of *petrissage*, is given. This method of general faradisation has been more used in America than in this country, and its effects are most satisfactory, the general nutrition of the patient being greatly improved, and the nervous system being both steadied and strengthened. This method may also be carried out by using a large sponge as the labile electrode instead of the hand of the operator, but the effect is more exciting and not nearly so efficient as when passed through the masseuse, and combined with massage. The spine should, during the sittings of electro-massage, have special attention, especially about its upper part, on account of the effect desired upon the sympathetic nervous system.

Another very efficient method is the application of packs of mustard bran to the upper part of the spine and over the solar plexus. This double packing greatly relieves many of the digestive troubles so common in these cases, and takes away much of the persistent headache.

The question of exercise is a most important and difficult

one, as you are almost always told that exertion causes much exhaustion and considerable aggravation of the symptoms. Exercise should be taken very regularly, but in moderation ; golf and cycling are both of service, but no method is so effective as the saddle.

I know that there is a prejudice against the saddle on the part of many middle-aged ladies and their friends ; but in spite of this I frequently call it into service, and given a steady horse and a careful attendant, even those who have never been in the saddle since childhood have received much benefit from the exercise.

Of course, if any actual uterine or ovarian lesion is present, it should receive skilled gynæcological treatment, and the other methods should be modified accordingly.

By a careful use of one or more of the above-mentioned means, I have not found it necessary to resort to much drug treatment. Sometimes when there has been a considerable deposit of urates, I have given a full dose of the freshly-prepared citrate of potash at bedtime ; and when there has been much irritability, with depression, I have found an occasional dessertspoonful of the effervescing bromide of soda with caffeine of service.

The question of diet is of much importance ; the usual course has been that in all cases where uric acid has been formed in excess, the amount of nitrogenous food taken has been greatly reduced. I am sure, however, that much better results can be obtained by cutting down the carbo-hydrates. Bread, pastry, potatoes, milk, and sugar should be avoided as much as possible, and then an increased quantity of butcher's meat may be taken ; the drinking of hot water, as before mentioned, being very helpful in removing any excess of nitrogenous waste. Under the influence of this dietary (more or less strict as required, and in some cases even going so far as the "Salisbury" dietary, in which nothing but minced meat and hot water are taken) I have seen many refractory cases lose their puffiness and weariness ; their digestion has improved, and their spirits and energies have

revived in a wonderful way. Alcohol should be avoided as much as possible, especially in the form of spirits; but a little still moselle or very dry champagne may be taken with food.

I fear that I have detained you much too long, but I have seen so many of these cases go on for months or even years, not dying, it is true, but what is sometimes even worse, making themselves and all around them thoroughly miserable, that I feel anxious to thoroughly ventilate the subject. Since I have based my treatment on the view that these symptoms are caused by the excessive formation and retention of uric acid, due to faults connected with nerve disturbances arising from changes in the uterus and ovaries, my results have been much better than under my earlier treatment by bromides, valerian and similar remedies. I do not wish to undervalue these, but I feel that in using them we are striking rather at the effects than at the cause, and it is in the hope of getting more light as to that cause that I have ventured to submit the somewhat crude views, to which you have so courteously listened, for your criticism to-night.

Dr. MACNAUGHTON JONES said that the correlation of lithæmic conditions and affections of the pelvic viscera had been specially insisted on by different authorities. Dr. Matthew Mann had made it the subject of his Presidential Address before the American Gynæcological Society in 1895. It was in such associated conditions that we often found those reflex irritations which we call neurotic. Apart from all the local and reflex disturbances due to uric acid and unhealthy states of the urine, these constitutional errors, proceeding possibly from dietetic causes, were of considerable interest to the gynæcologist. As regards diet, what between the advocates of exclusive vegetable and starchy diet on the one hand, and those who urge the complete restriction to animal food on the other, they were "between the devil and the deep sea." The apprehension of a lady-patient on whom he recently operated was all directed, before operation of laparotomy, not to the risk of this step

itself, but to the chance of her gout being increased by the fluid animal nourishment which she might have to take after it. A vegetarian physician had allowed her nothing for some time of this nature save a little milk and an egg daily. Another patient who had been under the opposite regimen thought that in her particular case bread was poison. Whatever benefit might be derived from baths, electricity, and massage, it had to be remembered that this treatment was often persevered in for a length of time to the detriment of the patient, if not to the actual risk of life. Local diseased states were temporised with, and the last state of the woman was worse than the first, when she came to be operated upon.

Mr. ARMSTRONG, in reply, said he had come to the conclusion that as regards diet they must in bad cases keep to one kind of food or the other ; it was the mixing of dietaries that was bad ; and when nerve-force was wanting, he thought a course of carbo-hydrates was dangerous ; in neurotic gout much nitrogenous food was required, and the Salisbury diet was then worth consideration. As regards the interference with local treatment, he had stated that if any gynæcological lesion were present, it must be treated ; his remarks were mainly intended for cases in which there was no local trouble.

THE BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, DECEMBER 10, 1896.

CLEMENT GODSON, M.D., PRESIDENT, IN THE CHAIR.

PRESENT : 29 Fellows and Visitors.

The following gentlemen were elected Fellows of the Society :—Wm. Edward Green, M.R.C.S., Sandown, Isle of Wight ; C. R. Martin, L.R.C.P. and S.Ed., London, S.W. ; Richard I. Mattice, M.D.McGill., L.R.C.P.Lond., Omaha, Nebraska, U.S.A. ; Wm. Francis Grant, M.D.Ed., London, E. ; Wm. Henry Hobson, M.R.C.S., Berkhamstead ; Lysander Maybury, M.D., Southsea ; Surgeon-Major Alick Burke, M.D.R.U.I., Woolwich, S.E.

The following gentlemen were proposed for election :—G. I. Waldron Johnston, M.D.R.U.I., Doncaster ; Peter Wm. Delamotte, M.R.C.P.Ed., M.R.C.S.Eng., Staines.

SPECIMENS.

Mr. E. TENISON COLLINS (Cardiff) showed a specimen of strangulated ovarian cyst, and read notes of the case.

HYSTERECTOMY.

Three papers were read on the subject of hysterectomy : (1) "A Fibro-myoma removed by Pan-hysterectomy, with remarks on different methods," by F. A. Purcell, M.D. (2) "Remarks Suggested by four Recent Cases of Hysterectomy," by G. Elder, M.D. (3) "Fibro-myomatous Uterus removed by Doyen's Method of Abdominal Pan-hysterectomy," by Fred Edge, M.D., F.R.C.S.

All three papers were illustrated by specimens ; while Dr. Elder also showed three specimens of pyo-salpinx.

ON FIBRO-MYOMA REMOVED BY PAN-HYSTERECTOMY. By
F. A. PURCELL, M.D., M.Ch., Surgeon to the Cancer
Hospital.

The case is that of M. S., aged 44, married, no child, but had one miscarriage. Admitted to the Cancer Hospital in October, 1896, complaining of pelvic pains, with weight and pressure on the bladder and rectum, and general distress.

Examination.—A large solid tumour is felt through the abdominal walls, bearing to the left, surface smooth, rather fixed.

Per vaginam.—Os normal, neck elongated; the body above is found occupied by a fibroid impacted in the pelvis; bimanually very little movement is obtained. Pan-hysterectomy advised. The patient was duly prepared for operation.

On October 31 patient was placed under ether, my colleague, Mr. Cotterell, assisting. Through a central abdominal incision, the uterus with the fibroid, together with the adnexæ, were drawn out of the abdomen. The Fallopian tube, ovary, and broad ligament on one side were raised and stretched upwards and outwards, then through the thin transparent tissue a double silk thread was passed by means of an aneurism needle, one thread was tied over the tube and the utero-ovarian vessels close to the body, to restrain hæmorrhage from the uterus—these threads are to be found on the specimen; the second thread was tied a certain distance to the outer side of the adnexa, close to the pelvis, including the utero-ovarian vessels, the tissue divided on the uterine side of the ligature, one end of the ligature left long, as all ligatures were treated; the round ligament was ligated; a double thread was passed at base of broad ligament, including the uterine vessels, tied, and tissue divided between. The broad ligament on the other side was treated in the same way.

The patient was now raised into Trendelenberg's position,

the bowels kept back by hot flat sponges. The tumour was drawn back upon the abdomen, the margin of the bladder defined, and above it the peritoneum was incised from side to side on the anterior surface of the tumour, its convexity upwards, the bladder and flap were carefully dissected away, down as far as the cervix and vagina.


The tumour was now rolled forwards on to the pubis, and on its posterior surface the peritoneum was incised from side to side, to correspond with that made on the anterior surface, and dissected down to the cervix and vagina.

Here comes in Mr. Jessett's suggestion of passing a long bivalve speculum *per vaginam* to make tense and to define the vault and to cut down upon from above. Some operators advise the passing of a long pair of forceps, some the finger of an assistant.

As a fact, the vagina was entered from above without the use of the speculum, the vault was divided around the os, except at the two ends of the flap; here ligatures were passed around the remaining tissue so as to include the lower uterine vessels, tied and divided; this severed all connection and the mass was released and withdrawn; one or two small bleeding vessels were caught and tied, otherwise the patient did not lose any blood.

Toilette.—The abdomen was thoroughly cleaned out—I was prepared to douche it out if necessary—all dirty sponges removed, and fresh hot sponges inserted to keep the bowels back.

Flap Arrangement.—The convex edges of the two flaps were raised up by forceps, three long silk threads were passed at their borders, each suture so placed that the loop remained above, and the ends knotted together were caught by a forceps passed up through the vagina and drawn down—all other ligatures placed on the broad ligaments were, each side lot separately, passed down and tied in a bundle. The three flap sutures were treated independently, and as each was drawn on by the assistant and made taut, the outlet of the pelvis became closed, the peritoneal surfaces of the



flaps coming into apposition ; these flap threads were not tied, but they were knotted below. This is the flap arrangement as suggested by Mr. Jessett.

The patient was now lowered down out of Trendelenberg's position, the abdominal wound closed, dressings and bandage applied ; the vagina was loosely packed with iodoform gauze, threads all arranged, a soft rubber self-retaining catheter passed into the bladder ; a perineal pad and bandage applied completed the operation, which occupied thirty-five minutes.

Treatment.—The bowels were duly moved ; on the fifth day the iodoform gauze packing in the vagina was removed. Little or no oozing had soiled it. The three flap sutures were removed by cutting one side and withdrawing by the other side with the knot.

The broad ligament ligatures came away on the tenth and twelfth day. Patient made a good recovery.

Observations.—I have described this operation for the removal of fibro-miomata by pan-hysterectomy, an extra-peritoneal method, carrying out my colleagues' suggestions, and as now practised by us at the Cancer Hospital. In the case of a very large fibroid, where the cervix becomes obliterated by a mass which forms a globular tumour impacted in the pelvis, and where some difficulty arises in incising the peritoneum, and in dissecting down the flaps, after ligating the broad ligaments the tumour may be cut off horizontally ; the stump is then seized by volsellæ or by having a stout silk thread passed through it, by which it can be held up ; the dissection of the flaps can then be carried down to the os and vagina ; time is gained by this procedure. I must note that in all abdominal sections the unforeseen complications must be taken into account and duly dealt with according to the operator's ingenuity.

The anatomical peculiarities offered by uterine fibromata as to pedicle and seat may account for the multiplicity of methods of operating upon them. It may be observed that different workers may devise the same methods entirely

independently of each other, particularly when these methods have been published in foreign languages unfamiliar to other busy workers.

The question for our consideration is not one of contrast between the extra- and intra-peritoneal methods, but between a perfected extra-peritoneal and a perfected pan-hysterectomy, which is truly, as I have endeavoured to describe, an extra-peritoneal method.

The intra-pelvic, or as we may call it, the infra- or sub-peritoneal method fathered by Schroeder and adopted by numerous operators, more recently by Milton, of Cairo, Sinclair, Heywood Smith, Reeves, Cullingworth, and others, is a supra-vaginal amputation, the peritoneum reflected and laced over the stump from side to side; a drain may or may not be made through the neck and os. There is, it is believed, more risk of post-operation bleeding from slipping of the ligature in this method, and a cavity is left between the sutured peritoneum and the roof of the vagina which contains the stump.

The operator who undertakes the sub-peritoneal operation has all the difficulties of total extirpation to encounter, with the addition of the suturing or lacing of the cut peritoneal flaps over the pelvic stump, which takes time.

The extra-peritoneal method, first introduced by Kœberlé, perfected by Dr. Bantock, practised by Tait, J. W. Taylor, and others, as also by myself, is also a supra-vaginal amputation with reflected flaps of peritoneum, a *serre-nœud* placed around the denuded stump, the peritoneum laced over the stump, and all brought out at the lower end of the abdominal wound, supported by a couple of pedicle pins. The *serre-nœud* may be removed after seventy-two hours. Here we have a suspended stump, which may cause great tension; the stump is apt to slough out and a sinus be left, which has to granulate, the patient's convalescence being prolonged.

Abdominal pan-hysterectomy, due to A. Martin, of Berlin, and perfected by Mr. Jessett, is an extra-peritoneal

method in which the stump plays the conspicuous part by its absence.

Prof. Martin has recently published his revised combined method which is worthy of quoting :—

“The broad ligaments being ligatured, so that the ovaries and tubes when divided fall away from the uterus. The respective ligamenta-sacro-uterina stretch, so that they are easily cut off the collum with scissors. The posterior vaginal vault, which is tightly stretched, is opened from above with scissors, or, from the vagina, with bullet forceps, and the opening enlarged by spreading the forceps. The peritoneum is sewn to the vaginal vault, the remains of the broad ligament on one side are sewn to the corresponding vaginal vault ; the collum uteri is pushed up out of the vagina by bullet forceps, and the other broad ligament secured in the same way. By lifting up the vaginal portion, the anterior vaginal vault is brought well in view and tightly stretched by the tumour, which now freely falls over the symphysis. An incision having been made with scissors at the junction of the anterior vaginal vault with the collum, the latter is detached from the bladder ; the peritoneum is sutured to the anterior vaginal vault. The entire pelvic floor sinks back, and the loose vesical peritoneum covers the hole in it, and after all the ligatures have been drawn downwards by the forceps. The vaginal margin is, without any difficulty, united to that of Douglas’ pouch, by a continuous suture in such a way as to cover the stumps of the broad ligaments.”

Dr. Le Bec, of Paris, read a paper at the meeting of the British Medical Association at Carlisle, July, 1896, and published in the *British Medical Journal* of October, 1896, which he styles “Total Hysterectomy for Large Fibroids—New Method,” illustrated, giving a series of forty cases from July 3, 1893, to June 15, 1896, with a mortality of 10 per cent. None of the deaths, he says, were due to any direct defect in the method of operation.

This method much resembles that worked out and

described by Mr. Jessett, except in the actual formation and closing of the peritoneal flaps. Mr. Jessett's first case, at which I assisted him, was operated on July 15, 1894.

It may be in the recollection of the Fellows that Mr. Jessett, at the meeting of this Society on October 10, 1895, read a paper, which will be found recorded in the Journal, when he presented a description of his method, with a series of eight cases, having a mortality of 7 per cent.; since which this method has been adopted by some of our provincial colleagues, in contradistinction to our metropolitan operators.

M. Doyen, of Rheims, recently paid us a visit at the Cancer Hospital and favoured me with some rough sketches of his method, which I present to the Society. The method is as follows :—

“The patient is placed in Trendelenberg's position, and the tumour pulled out of the abdomen, usually with the help of Reverdin's apparatus. The posterior vaginal fornix is perforated by curved forceps (*per vaginam*). With the aid of a long-handled volsella the cervix is seized; then its lateral attachments are liberated by scissors. The anterior lip of the cervix is next caught up in the forceps (if not already accessible), the mucous membrane of the anterior fornix divided with scissors, and the cervix pulled up and dissected off the bladder. The left forefinger is pushed from behind under the right broad ligament, the vessels pushed aside as much as possible, and the ligament divided between the ovary and the uterus. The tumour is now smartly pulled to the left, and is thus pulled out of its serous envelope to a great extent, and the left broad ligament is divided. The cut ligaments need simply be held between the fingers. The bleeding vessels can be tied at leisure. Preliminary clamping, Doyen insists, is a great mistake. The tubes and ovaries are removed, their pedicles drawn into the vagina, and the long rent in the peritoneum is sewn up by a continuous suture. Sub-peritoneal and intra-ligamentous tumours, which render the cervix inaccessible, are

to be rapidly enucleated after division of the peritoneal covering above them ; the cervix may then be reached. Doyen deprecates the timidity displayed by most surgeons respecting these 'uterine arteries.' The less hæmorrhage is dreaded and the quicker the operation is conducted, the less blood will be lost. Out of 147 operations of this kind only seven deaths are recorded." (*Archives Provinciales de Chirurgie*, October, 1896.)

I will also allude to Snegizeff's modification of M. Doyen's method. Two incisions are made on each side of the uterus parallel to the insertions of the broad ligaments, front and back. The lower ends of these incisions in front are joined by a horizontal incision above the bladder boundary, and those behind are similarly joined by an incision a little above the floor of Douglas' pouch. The upper ends of the incisions do not quite reach the points of origin of the Fallopian tubes. Then the peritoneal covering of the uterus is stripped off quickly in correspondence with the incisions. Through the slit (in the broad ligament) thus formed a stout catgut ligature is passed by means of Deschamp's needle and tied beneath the appendages, so as to include all the vascular branches on the front and sides of the uterus. Forceps with long blades are then applied to the uterine ends of the ovarian and round ligaments and of the Fallopian tube. Then the broad ligament is cut through and worked off the side of the uterus between the point of ligature and the clamp. This is repeated on the other side. The tumour having been thus freed on both sides, is to be freed from the bladder. The cervix becomes free in front and at the sides. The posterior peritoneum is separated down until the vaginal portion of the cervix can be felt free from it. Then the posterior wall is cut through with a knife and the margin of the vaginal mucous membrane is caught up with forceps, and the cervix is freed with the knife laterally and in front. The tumour and the whole uterus thus are freed.

The uterine appendages are cut off below the points of

application of the clamps, the abdominal cavity is cleaned and a pair of long-bladed, curved forceps is passed through the vagina, and the long sutures upon the broad ligaments are caught in them ; thus the stump of the broad ligaments is drawn into the vagina and held ; the anterior and posterior peritoneal flaps are sewn together from the peritoneal aspect with continuous suture, by which the vagina and the depressed broad ligament stump are completely excluded from the peritoneal cavity. No sutures are left in the peritoneal cavity. (See Abstract by Dr. Edge in BRITISH GYNÆCOLOGICAL JOURNAL, part xlv., p. 269.)

It may be conceded that the adopting of abdominal hysterectomy for the removal of fibro-myomata as now propounded has been the outcome of the practice of extirpating the entire uterus by vaginal hysterectomy.

Dr. R. Pichevin, in the *Journal de Medicine de Paris*, January 5, 1896, says : " During the last two or three years vaginal hysterectomy has entered into a state of improvement and of general employment owing to the exertions of M. Péan, the contributions of M. Segond, in making the method known, the advocacy of the antero-posterior median section by M. Quénu, and the efforts of M. Doyen, so that large fibromas may be advantageously treated by vaginal hysterectomy."

M. Péan has made known the operation by *morcellement*, which is characterised, first, by a successive compression from below upwards, of the whole depth of the broad ligaments, thus ensuring a perfect control of the hæmorrhage ; secondly, by an irregular *morcellement*.

Müller, of Bale, long ago observed that an antero-posterior median section of the uterus gave rise to no hæmorrhage, and that such vertical bi-section of the uterus permitted hysterectomy to be performed rapidly and the broad ligaments to be secured with facility. This method was brought out in opposition to M. Péan's operation by M. Doyen, of Rheims. The characteristic feature of this process of uterine section is that the control of the hæmor-

rhage requires no attention until the uterus has been brought out at the vulva.

M. Quénu practises a vertical median section not only of the anterior, but also of the posterior wall of the uterus. Therefore, in all difficult cases when the uterus cannot be brought down, Péan's *morcellement* is the one to be selected, Doyen's best suited to easy cases.

An indispensable precaution is to operate on a clean uterus at the moment it is to be incised, and with that object it is necessary to have recourse to a previous curetting, and to use the best antiseptic precautions.

REMARKS SUGGESTED BY FOUR RECENT HYSTERECTOMIES. By GEORGE ELDER, M.D., Surgeon to the Samaritan Hospital for Women, Nottingham.

During the past three months I have had occasion to perform four hysterectomies—two vaginal, for malignant disease, and two abdominal, for fibroid, and inasmuch as much doubt in various matters affecting this operation still surrounds it, I venture to bring before you short notes of these cases and some comments thereupon for your consideration and discussion.

(a) MALIGNANT DISEASE OF UTERINE BODY.—VAGINAL HYSTERECTOMY. — RECOVERY.

Mrs. B., aged 65, V-para, living at Borrowash, near Derby, was admitted into the Samaritan Hospital for Women, on the recommendation of Dr. Hunt, under whose care she had been, on September 16, 1896. There was a history of a *non-offensive* vaginal watery discharge and frequent "bouts" of flooding for the past twelve months, accompanied by almost constant pain and considerable loss of flesh and colour.

For the latter part of the time the patient was confined to bed because walking about brought on profuse hæmorrhage.

On vaginal examination, the uterus was felt to be considerably enlarged, particularly on its posterior surface, movable ; the cervix healthy and os patulous. Under ether the cervix was dilated so that the uterine cavity could be examined by the finger, when it was found that, involving its posterior wall, there was a distinct swelling, soft and ulcerating in parts, from which, for diagnostic purposes, scrapings were withdrawn by the curette. These, submitted to microscopical examination by my friend, Dr. Miller, an experienced pathologist, confirmed the diagnosis of malignancy.

September 20.—The patient being placed in the lithotomy position, and the limits of the bladder defined by the sound, vulsellum forceps was applied to the atrophied cervical lips and the anterior and posterior vaginal reflections cut through. Bit by bit the broad ligaments, first on one side and then the other, were tied with silk, cut short, and cleared from uterus, until their upper extremity was reached. By reason of the contracted vagina and the extreme friability of the uterine tissue, breaking down every now and again under pressure of the forceps, delivery of the organ was somewhat difficult. When done, the vagina was cleaned by "swabs" of gauze tissue soaked in 1 in 40 carbolic lotion, dried, and lightly packed with strips of iodoform gauze.

The patient made a very good recovery, and left the hospital well on October 28, and in a letter which I had from Dr. Hunt a few days ago, her improvement is said to continue, and she now goes about her domestic duties without pain or discharge.

Gross appearances (by Dr. Miller). The uterus was of the size of two fists, smooth and round externally, with the exception of several nodules on the posterior surface and one or two small ones on the anterior. The uterine cavity was small, of no definite shape, thickly studded with nodules, except at one spot which was dark in colour and covered by a thin slough, evidently the seat of the previous curetting.

(b) MALIGNANT DISEASE OF UTERINE BODY.—VAGINAL HYSTERECTOMY.—RECOVERY.

Mrs. S., aged 45, the mother of five children, was seen by me at Loscoe, Derbyshire, with Dr. Turton, on October 7, 1896.

There was a history of metrorrhagia of three months' duration, never large in quantity, and occasionally displaced by watery discharges *unaccompanied by pain*, but corresponding with progressive and considerable loss of flesh and deepening cachexia.

Beyond a heavy mobile uterus with hard abraded cervix, nothing could be defined, and the patient was removed to Nottingham for further examination and treatment.

On October 11, under ether by means of Hegar's dilators, the cervical canal was opened up sufficiently to admit the middle finger. When just within the internal os, a rough hard-edged ulceration was felt, indeed, so indurated, that the curette made but little impression upon it, certainly not enough to be of any value for microscopic examination. In addition the uterine walls were found thickened.

From the clinical symptoms a diagnosis of cancer was given, and vaginal hysterectomy recommended and done on October 15. This was done by the usual method, making an anterior and posterior semi-circular vaginal incision, clearing the bladder in front by the finger up to the peritoneal reflexion, incising this with scissors and then after cutting into Douglas' pouch, tying off bit by bit the broad ligaments on either side with silk, cut short, and dividing them close to the uterus. The comparatively small size of the vagina and the bulkiness of the uterus made the operation somewhat difficult and tedious. No attempt was made to bring together the vaginal surfaces, and strips of iodoform gauze passed well within the pelvic cavity, supplemented by pads of Gamgee tissue placed against the vulva and kept in position by a T bandage, completed the operation.

As there was considerable shock several rectal injections

of a quart of water and ʒj. of brandy were given within a short time and with decided benefit.

After the first twelve hours the after progress of the case caused but little anxiety. The pulse only on the night of the operation and next day was over 100, but never subsequently, but the temperature was somewhat erratic, due probably to the shedding of the ligatures.

The iodoform gauze was removed on the second afternoon and replaced daily for a week by fresh strips, vaginal injections of Condyl's fluid and water twice daily being then substituted.


On November 19 the patient returned home perfectly recovered from the operation.

The specimen, which is herewith presented, and the photograph, show the ulceration felt at the preliminary exploration.

Comments on Cases of Vaginal Hysterectomy.

With regard to the question of diagnosis generally, too much reliance, I think, ought not to be placed on the results obtained by the microscope. As in my second case, occasionally no scrapings are available, and even when they are, whatever doubt there may be cannot always be cleared up by this means; so that we are thrown back on the clinical features of the case which, after all in the majority, are sufficiently distinctive to establish the nature of the case. In a softened uterus, such as my first, a preliminary curetting is not without danger of rupturing the walls—an accident which I have known happen in very experienced hands, and one not to be contemplated without grave anxiety.

Passing on to the question of symptoms, in both cases the discharges did not smell, and only in the first was pain present, but in both there was the somewhat rapid depreciation of health, loss of flesh, colour, and strength, which with exceedingly few exceptions go with malignant disease, and what I think is of some importance, these symptoms





Malignant Disease of the Uterine Body (G. Elder).

had in the observation of friends set in prior to outward evidence of local disease.

Coming to the vexed question of ligature *versus* clamps for controlling hæmorrhage, I have always used as a routine measure, silk ligatures, and cut them short, occasionally supplementing them with pressure forceps for points more than usually difficult to command with ligatures, and although vagaries of temperature have followed until the silks had all come away, these have given me no anxiety, inasmuch as they have not interfered with the progress of the case towards recovery.

In these and other cases I have seen, rest in bed for five or six weeks has been insisted upon as a precaution against hernial troubles, as I have always thought that with the weakening of the pelvic floor following removal of the uterus, this is a real danger, and as a matter of fact I know of two cases in my own locality where this sequel has followed. On this point I should be glad to hear the experience of other Fellows.

(c) UTERINE FIBROID.—ABDOMINAL HYSTERECTOMY.—
RECOVERY.

Mrs. M., aged 28, married, multipara, living at Whatstandwell, Derbyshire, first seen by Dr. Macdonald, of Crich, on Monday, September 28. She was a florid, healthy-looking, well-built woman, and in bed, complaining of intense abdominal pain, for which she had tried poulticing, turpentine stupes, and hot fomentations, without any relief.

On examining her abdomen, an enormously distended bladder was found, and the fact that she had not passed any urine since the previous Thursday (over three days) was elicited, when she had undergone an unusual amount of fatigue, having been on her feet all day long cooking for a wedding party. A very large amount of urine was drawn off by the catheter, which, however, did not entirely remove

the abdominal prominence, and palpation revealed a large, rounded, hard solid mass in the hypogastric region, stretching upwards, and also somewhat to the left towards the lumbar region.

Vaginal examination gave almost the impression of a child's head impacted in the pelvis, and only with difficulty could the os uteri be felt, high up behind the pubes. The tumour was movable to a slight extent from side to side, but by no pressure could it be elevated above the pelvic brim. A diagnosis of a sub-peritoneal fibroid tumour with a long pedicle; which had become impacted in the pelvis, was made. The patient had no appetite, a furred tongue, foul breath, and constipated bowels.

Prior to this attack of retention, she had no very marked symptoms of uterine or any other trouble, except at each menstrual period some transient difficulty in micturition—a difficulty of some two or three years' duration, also occasioned by a long walk or extra fatigue, and which soon passed away on resting. Menstruation was in every sense normal, and always had been.

The treatment adopted was absolute rest in bed, elevation of the hips, and endeavours to push the tumour out of the pelvis, and so relieve the pressure symptoms, but without success. All the urine had to be drawn off by catheter up to the operation. (The above notes were kindly supplied to me by Dr. Macdonald, and also the record of the case after the operation.)

On Friday, October 2, I saw the case with Dr. Macdonald, and concurred with him as to the necessity of an operation, which, with his assistance, and that of Dr. Stack, was performed at the patient's home on October 10.

The tumour was found to be attached to the posterior and upper part of the uterine body—sessile—and so tightly locked in the pelvis, that a considerable amount of force had to be used before it could be disengaged. After tying off the broad ligaments, upon either side low down, and ligating the ascending uterine arteries, a circular incision

was made through the peritoneal investment, and the tumour with the attached uterus, down to the cervix, cut off above the temporary elastic ligature which had been previously applied. Spouting arteries were ligated and the margins of the stump brought together by tiers of silk ligatures until nothing but the peritoneal edges were left. These were sutured and the stump fixed to the lower angle of the wound, so that the upper surface was extra-peritoneal. The abdominal wound above the stump was brought together in the usual manner, only that the bottom stitch in the passage, from one side to the other, transfixed the posterior peritoneum of the stump ; thus completing its peritoneal investment.

I omitted in its proper place to note that, although the nurse had used the catheter just before the operation, on opening the abdomen the bladder was seen with enormously hypertrophied walls reaching half way up to the umbilicus, so that before proceeding, it had to be emptied by the use of a long male catheter.

The tumour weighed over three and a-half pounds.

Record after the Operation.—A few hours after the operation the patient passed urine and continued to do so regularly and freely, without the catheter. For the first twenty-four hours she had nothing ; but her mouth was washed out with water. On the first and second night only a quarter-grain morphia suppository was used. Feeding on the second day consisted of sips of milk well watered ; third day the same ; fourth day, beef tea, milk and soda water, followed by tea and toast ; on the fifth day, fish and chicken were given ; on the seventh day and from this time onwards the ordinary diet was gradually and cautiously commenced.

There was no sickness, no pain, in fact not a single bad symptom to give the slightest anxiety in the after-treatment.

The pulse was good, varying from 100 to 120 the first two days, then 80 afterwards. The temperature for the first few days 99° to 100° ; on one night it rose to 101° and

then fell next morning to 99°; afterwards normal and so remained.

The bowels acted every day with an enema, and there was very little trouble from flatus.

On the seventh day Dr. Macdonald removed the dressing and stitches, there was no discharge, and on the fourteenth day the line of incision was healed except where the stump was fixed to the abdominal wall.

November 14.—The patient goes out daily and feels well in every way. The place where the stump was stitched to the parietes is all but healed. There has been a very slight vaginal discharge.

No doubt much of the credit due in this case belongs to Dr. Macdonald, first for his prompt recognition of the cause of the retention of urine and the necessity for early operation, and secondly for the skilful manner in which unaided he carried out the post-operative care of the patient.

(d) TOTAL ABDOMINAL HYSTERECTOMY FOR AN
INTRA-LIGAMENTOUS FIBROID TUMOUR.—DEATH.

Miss P., aged 36, was sent to me on November 11, 1896, by Dr. Fletcher, of Castle Donington, suffering from an abdominal tumour, which by its increasing size and situation was seriously affecting the patient's health. Owing to the fact that the patient had been very adverse to consulting a medical man, she had seen Dr. Fletcher only twice, the first time some six months ago, and the second a week or two since, which, coupled with her secretiveness, explains why so little of the history of the growth could be elicited from her. Her relatives had noticed her increasing size during the last three or four years. She was a somewhat tall, spare woman, with the typical "ovarian face," and admitted that latterly she had lost flesh. Menstruation began between the twelfth and thirteenth years, and for five years was regular, subsequently being most erratic in its occurrence, often missing for months, and now nothing has been seen for six

months. All through her menstrual life the flow has been exceedingly scanty. Some six months ago the abdominal pains which, so far as we could make out, had been for a very considerable time pretty constant, became so accentuated as to compel her to be in bed for a fortnight, and since then she has only got about with very great difficulty.¹ On examination the abdomen is seen distended to some distance above the umbilicus by a somewhat irregularly surfaced growth, nodular, resistant, and only very slightly movable from side to side. *Per vaginam*, high up behind the pubes, and to the left, one can just feel the hard thin lips of the os uteri, whilst behind in Douglas' *cul-de-sac* is felt fixed a round solid fibroid growth, which also invades the upper parts of the vagina, and is obviously the inferior portion of the growth felt abdominally. The diagnosis made was that of an intra-ligamentous fibroid, and in view of its progressive character and disabling effect upon the patient's health, extirpation was advised.

On November 16, an incision was made through the parietes from the pubes to a couple of inches above the umbilicus, the upper limit of the growth, disclosing to view the tumour, which was found to have dissected up the layers of the right broad ligament, the peritoneal folds of Douglas' pouch, and encroaching somewhat upon the left broad ligament, having drawn in its growth the uterus upwards and to the left. Large venous sinuses coursed over the growth, and posteriorly several coils of small bowel were firmly adherent to it. The relations having been determined, and the left broad ligament tied off, a circular incision was made through the investing capsule—vessels being secured by ligature and forceps as needed and enucleation proceeded with. This was a tedious and difficult process, especially in the pelvis, and when it was completed and the tumour lifted

¹ Her sister tells me that latterly pain has been constant day and night. By day, preventing her looking after her dairy; and by night frequently making sleep impossible.

up, it was found to have sprung from the right side of the uterus by means of a pedicle not more than two fingers' breadth. As its removal had left a large sac, with the whole pelvic floor and posterior surface of the uterus bared, I thought the better plan was to complete the operation by removing the uterus. This was done by ligaturing the uterine arteries, opening into the vagina back and front, and tying off the inferior portion of the broad ligaments. The mouth of the sac above mentioned was then sutured to the lower part of the parietal peritoneum, thus establishing extra-peritoneal drainage from the bared surfaces through the vagina, and the upper part of the abdominal wound sutured as usual with silk-worm gut. A loose packing of iodoform gauze for the sac and Gamgee tissue for the upper part of the wound constituted the dressing. The operation was a long one, and followed by very profound shock, which was met by rectal injections, frequently repeated, of brandy and warm water, hot bottles, &c. Although the patient recovered consciousness, the death fourteen hours afterwards was doubtless due to the severity of the operation.

The specimen shown to-night consists of the tumour, which, in its fresh state, weighed over eight pounds, and the uterus with the cervix much elongated by the traction to which it had been subjected.

Comments on Abdominal Hysterectomy.

In thinking over the history of both these cases, one is struck by the insidious manner of their development up to the time when operative treatment became an imperative necessity in the first case, uterine disease never being suspected until the attack of retention of urine supervened: whilst in the second, up till a few months from her coming to me, the patient's general health was so little disturbed that her enlarging belly gave her no mental disquietude. It is also worthy of note that instead of being increased the menstrual flow was, in the first, normal as to quantity, and in the second, almost in abeyance.

Passing on to the manner of operating, the first method was one I have used now in a number of suitable cases, and although it is not free from disadvantages, notably hæmorrhage resulting from shrinkage of the tissues and loosening of the ligatures, yet it compares very favourably with the clamp method, by reason of its easier and shorter convalescence. The more I see of abdominal hysterectomy, the more am I convinced that no one mode of removal is applicable to fibroid growths ; yet, while confessing this, the opinion is gradually being forced on me that, for the majority, pan-hysterectomy or total extirpation is the best method which has yet been devised. It need add but little to the time of the operation, and very little to the difficulty. This was the method used in my second case, and although the issue was fatal, still this was clearly due more to the inherent difficulties of the case than the manner of operating. And this brings me on to the question of shock treatment. In this particular case the patient was well enveloped in flannel, as is my wont in abdominal cases, the room was well heated, and the operation done as quickly as possible, and when shock supervened, in addition to heat, large rectal injections of warm water with brandy were frequently repeated, and my regret is that I did not try saline transfusion in addition. I hope some of the Fellows who may have tried this, will give in to-night the result of their experience. It has also often occurred to me that an operating table heated with hot-water piping, would at times be a possible saver of life, and I should also like to know if such a table is in existence.

Finally, gentlemen, I think that these disjointed, and necessarily imperfect remarks upon one of the most important operations which can engage our skill, will not be thought unworthy of this Society, if they are the means of inducing some of our Fellows to give us the benefit of their large and matured experience.

FIBRO-MYOMATOUS UTERUS REMOVED BY DOYEN'S METHOD
OF PAN-HYSTERECTOMY. By F. EDGE, M.D., F.R.C.S.,
Wolverhampton.

As I understand that a paper on Doyen's method by Mr. J. W. Taylor is to be read shortly before the Society, I will not now go into the matter in detail, but will merely give an outline of the steps of the operation. The Trendelenburg position is used. After the abdomen has been opened, and the uterus delivered through the incision, an assistant passes a large pair of forceps into the vagina and up into the posterior fornix. The operator cuts down in the middle line with scissors upon the elevation in the floor of Douglas' pouch caused by the forceps. Having made a free incision into the vagina, the anterior lip of the cervix is seized with volsella and drawn strongly upwards. With scissors the mucous membrane is snipped round the cervix and pushed up in front bluntly with the finger, thus separating the bladder. Having freed the cervix sufficiently all round he now causes his assistant to grasp between his finger and thumb of the right hand the base of the right broad ligament. Making a start from behind in the middle line now he cuts upward on the right side so as to leave all the broad ligament with the tubes and ovaries and a free flap of peritoneum and capsule of the uterine mass. Practically it means that he cuts through the whole broad ligament as near the mass to be removed as possible. Usually there is only one artery that spouts—the uterine—this is picked up with forceps. The other broad ligament is held by the assistant's left hand and similarly cut through. The few arteries picked up on both sides are now ligatured and the operator has done his work except trimming.

To make the matter clear, it is better to describe here what we now see. The tumour is removed. There is a flap of peritoneum and broad ligament on each side and behind the bladder, on which are the tubes and ovaries. This flap is large enough to easily form the new pelvic floor

and leave something over. The apices of the two flaps are now transfixed and doubly ligatured. The ovaries and tubes are removed by cutting off the parts beyond the ligatures. (The ovaries and tubes may be left if it is desired.) The open recto-vaginal and vesico-vaginal cellular spaces are closed by a continuous catgut suture uniting peritoneum and vaginal walls. The flaps are pulled down over the raw surfaces of the broad ligaments by the ligatures which have been left long after tying off the tubes and ovaries. The pelvic floor is now formed of peritoneum only and not a suture is evident.

A continuous catgut suture is now passed, picking up peritoneum all round, *i.e.*, from both flaps and from rectal and vesical peritoneum. This is tied and pulled into the vagina; another similar suture about half an inch higher is passed and tied. This absolutely shuts off the peritoneal cavity from the vagina, and no blood or other fluid can enter the abdomen. The abdomen is closed after bringing the patient into a horizontal position and cleaning the peritoneal cavity.

I have now performed the operation twice, and have been struck by its simplicity. Both patients recovered.

In the discussion that followed the reading of these papers,

Professor MAYO ROBSON (Leeds) said that he was much interested in the subject of shock, dwelt on by Dr. Elder. Some time ago he read a paper on the "Treatment of Shock by Transfusion," before the Clinical Society. He was led to adopt this treatment by the great resemblance between death from shock and death from hæmorrhage, a resemblance already worked out by Dr. Lauder Brunton. This observer found that in animals dead from shock, nearly the whole of the blood was collected in the abdominal vessels. The blood is not actually lost, but it is lost to the circulation. If this stagnant blood can be set going again, as by diluting it by transfusion, the patient may be saved. The first case in which he tried it was one of amputation at the hip, for

sarcoma. The limb had been first Esmarched, and the femoral artery and vein were duly secured, so that there was no great hæmorrhage. The nurse came shortly after the operation to say that the patient was dying. He at once mixed some salt solution, a tea-spoonful of common salt to a pint of ordinary water, and injected five pints straight off, so that the patient came round. The second case was one of hysterectomy, and the result was similar. Just as there might be a return of fainting after recovery from hæmorrhage, so there might be a recurrence of shock, and it might be necessary to transfuse a second, and even a third, time. The salt solution was simply a bland fluid, which filled the vessels and allowed the brain to receive its blood-supply. The recovery, after transfusion, was very rapid, as he had proved in many cases. With reference to the value of the microscope in diagnosis, he had often been disappointed with its results, and he much preferred to rely on clinical signs. He thought that no microscopist could tell with certainty from very small scrapings whether a case were one of fungous endometritis or of malignant disease. The subject of hysterectomy was always interesting, for he thought they were getting nearer to perfection in the operation. Jessett's, Le Bec's, and Doyen's methods were all the same in principle, though worked out independently. Some such procedure would probably come to be the recognised operation. For his own part, he had mostly adopted the intra-peritoneal method, based on Schröder's, with this modification, that after suturing the peritoneal flaps, he brought the stump up to the abdominal wound, fixing the parietal peritoneum round it, and the aponeurotic structures over it. By this means the uterine cicatrix was practically extra-peritoneal. The only patient he had lost died on the fourteenth day from intestinal obstruction, brought about by a kink in the jejunum, and it was to avert such a complication that he treated the stump as described. But he had no doubt that the method of the future would be one of the three above-mentioned.

Mr. BOWREMAN JESSETT said that he had been much interested in the three papers. One point that would come up in the future was the question of early operation for myoma. At present, patients were often told to wait for the menopause. No doubt some myomata disappeared spontaneously, but it was at the expense of much suffering. Early removal could usually be accomplished with safety, but in later stages this was often difficult and dangerous. The most difficult case he had had was a recent one, where the tumour weighed 24 lbs. ; the patient could no longer get about, and he performed pan-hysterectomy. The large and small intestine, as well as the omentum, were adherent to the tumour, and the operation took one hour. The patient died of shock. If she had been advised some years before to have the tumour removed her life might have been saved. Dr. Purcell's was a similar case. Dr. Elder's first case was sub-peritoneal ; the second was very like his own. The shock in these cases was largely due to the removal of a great mass of tissue full of blood, and the sudden relief from pressure on the plexus of nerves, sympathetic and others. The shock was greatly increased by the separation of intestinal adhesions. They would do well to bear in mind Professor Mayo Robson's remarks on the treatment of shock. In the case above mentioned, he had injected two or three pints of fluid into the veins, and afterwards wished he had injected five or six pints ; in another case of the kind he should carry out transfusion, as Professor Mayo Robson had described. He believed that before long myoma of the uterus would be treated by total extirpation ; the shock was much less, and the case closely resembled in this respect one of vaginal hysterectomy. Doyen's and Le Bec's operations were practically the same as his own, but he believed all three were independent of each other. This showed that the tendency of operators was similar in different parts of the world. He had sometimes sent down scrapings for microscopical examination ; he thought the cases malignant, from microscopic examination they were said to be benign.

But he had trusted the clinical signs and operated; and they proved the clinical observation was correct. This may have been due to the scraping being removed from a part more infected. There was the difficulty that the part curetted might not be the diseased part, because the scraping did not go deep enough. He noted that Dr. Elder, in his vaginal hysterectomies, ligatured the broad ligaments from below upwards. He believed it was easier to antevert or retrovert the uterus and apply the ligatures from above downwards. Also, Dr. Elder left the appendages behind. He believed that in young women it was better to remove them, for otherwise the patient was subject to much pain and discomfort at the monthly periods for some time after. Melancholia was not very uncommon after oöphorectomy, especially in young women, but they improved after a time. In answer to Dr. Elder's question as to heating the operation table, he might mention that the table at the Cancer Hospital was so constructed as to form a hot water bed on which the patient could lie.

Dr. HEYWOOD SMITH, referring to Professor Mayo Robson's remarks, said: In sub-peritoneal operations the stump was left free, and the adhesions, if any, generally occurred at the place where the ovarian vessels were tied. The peritoneum over the stump was so smooth that he thought it was better to drop it back into the abdomen, in order to take off tension, and because it was easier, in case of need, to reach it through the vagina. In spite of the success of pan-hysterectomy, if hysterectomy was going to be done more extensively, he thought that the sub-peritoneal method would be the safer operation, because it was important to shorten the duration of such an operation. He considered that in young women it was better to leave the ovaries and tubes, if healthy, even if the patient suffered some temporary pain with the menses, because, as Dr. Routh had maintained in a paper read before the Society, the ovaries seemed to exert a special action, independent of the function of ovulation.


Dr. HERBERT SNOW said that microscopic examination was a fetish to many men ; unless in very careful hands, clinical data were far more reliable, as was proved in the case of the late German Emperor. Many errors were possible, even if a large piece of tissue was available. The microscope could prove a positive, but not a negative, condition.

Dr. BALDWIN (of Ohio, U.S.A.) said he had read a paper on hysterectomy at the last meeting of the Ohio State Medical Society, describing what to many was a new procedure. Those interested in the matter would find the paper in the November number of the *American Journal of Obstetrics*. The method was based on over fifty cases of hysterectomy. He proceeded as follows :—After opening the abdomen, the most accessible broad ligament was clamped, outside the ovary, down to the uterus. A short clamp was placed on the ovarian artery near the uterus, then with a single cut of the scalpel, the broad ligament was divided within the first clamp. The procedure was repeated on the opposite side. Peritoneal flaps were then made, front and back, in the usual way. The uterine artery on each side was seized with forceps, and the uterus then amputated just below the internal os in a wedge-fashion so as to give two uterine flaps. Each uterine artery was then tied, without including any tissues besides in the ligature. The ovarian artery was drawn out and similarly tied alone. Occasionally an aberrant vessel would bleed and also require ligature. A piece of gauze was then passed down through the cervix into the vagina and left for drainage. The cervical flaps were then brought together, after bringing down the round ligaments between them ; the peritoneal surfaces were turned in and sutured over. The round ligaments held up the uterus ; and two new ligaments were formed by the folding in of the peritoneum. The operation generally took about forty minutes. When there had been much separation of adhesion or dissection, he drained through the vagina, or removed the cervix and passed iodoform gauze down into the vagina. Notwithstanding antiseptic precautions, he always felt safer if

the vagina and peritoneal cavity were separate ; and for this reason he generally left the stump formed by the cervix. By attention to the details just described, the risk of subsequent intestinal obstruction was minimised. It was estimated that 1 per cent. of cases of hysterectomy succumbed to intestinal obstruction ; so that if an operator's mortality were 5 per cent., it would be itself reduced by 20 per cent. if intestinal obstruction could be insured against. As regards vaginal hysterectomy, they were by no means satisfied in America with the after results ; there was too much recurrence, and so they were beginning to adopt a combined vaginal and abdominal operation, and to remove the whole of the broad ligaments. At the Johns Hopkins Hospital they were doing even more ; they were dividing the pelvic peritoneum posteriorly, and removing the sacral glands. But this, he thought, was carrying operative zeal too far. If the patient had got such advanced disease as to require this treatment, the case was, in his opinion, too advanced to be touched at all. By the combined method he had so far had no recurrence ; but as it was not three years since he began it, it was too soon to form conclusions. By the ordinary vaginal procedure it was impossible to get beyond the gross disease.

The PRESIDENT observed that he could quite corroborate what had been said by Professor Mayo Robson and Drs. Snow and Baldwin as to the unreliable character of the evidence as to malignancy supplied by microscopic examination.

Dr. ELDER, in reply, said he was glad that the papers had been productive of so interesting a discussion. The remarks of Dr. Baldwin were suggestive and valuable. In answer to Mr. Jessett, he observed that his reason for not removing the ovaries was that his patients were aged 65 and 45 years respectively. In younger women it was his practice to remove them. He had had no case of hernia after vaginal hysterectomy in his own practice ; but he had long thought that this was a possible risk.



Dr. EDGE, in reply, said that he was much pleased with Dr. Baldwin's remarks, and struck by his method. It seemed to him that the principle of Dr. Baldwin's operations was just the same as that of Doyen, Lebec and Jessett. In each case the peritoneum was preserved, and consequently the circular suture which Doyen used included the round ligament, and so counteracted the tendency to hernia. The principal difference was that Doyen obtained his flaps from the sides; while the other three obtained theirs from in front and behind.

Dr. PURCELL also briefly replied.

THE BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, JANUARY 14, 1897.

CLEMENT GODSON, M.D., PRESIDENT, IN THE CHAIR.

PRESENT : 30 Fellows and Visitors.

The following gentlemen were elected Fellows of the Society : T. Waldron Johnston, M.D., Doncaster ; Peter Wm. Delamotte, M.R.C.P.Edin., Staines.


The following were proposed for election : J. Buchanan, M.B., F.R.C.S., Melbourne ; R. Petch, M.D., York ; H. Colligan Donald, M.B., Paisley ; P. Macgregor, F.R.C.S. Edin., Huddersfield ; — Tyrie, M.B., Keighley, Yorks ; H. de Carle Woodcock, M.R.C.S., Leeds ; C. Ward, F.R.C.S.I., Pietermaritzberg, South Africa ; Henry Harley, M.D., Battersea.

ANNUAL MEETING.

Treasurer's Report.

The Treasurer (Dr. Mansell Moullin) said : I have much pleasure in again bringing before you a very satisfactory financial report. There are one or two points to which I may draw attention. The subscriptions from the Fellows of the Society are well maintained, and amount to £387 3s. This is about £12 less than last year, but in a large Society there must necessarily be many withdrawals for one reason or another, and we cannot expect to have every year such a large accession of new Fellows as on the last occasion.

The sale of the American edition of the Journal to Messrs. Hirschfeld has given us a sum of £73 10s. Unfortunately this item will not continue to appear in the



balance sheet, Messrs. Hirschfeld finding themselves unable to renew the contract.

The sum received for advertisements in the Journal amounts to £23 10s., but a further cheque was due from the agent at Christmas, which will add to the balance on the next occasion. I hope we may find some way of increasing our income from this source, but the fact that the Journal is disseminated all over the world does not appear to enhance its value as an advertising medium. Our dividends on investments are the same as last year. On the other side of the account the expenditure in connection with the Journal amounts to £281, being £20 in excess of last year. This is not a matter for regret. It is of the utmost importance to maintain the Journal at a high standard of excellence, and this cannot be done without expense. I think the Fellows will agree that our present editor, Dr. Schacht, who suddenly and quite unexpectedly found himself burdened with all the labour and responsibility of editorship, has already proved his capability, and that the Journal could not possibly have fallen into better hands.

Rent and attendance, three quarters, £96 17s. On the last occasion I told you the Council of the Society hoped to come to some arrangement with the Royal Medical and Chirurgical Society, which would be more economical and equally advantageous to ourselves. This has now been accomplished. The first seven years of our lease expired at the end of September, and the Council decided to throw up the lease, and entered upon a fresh agreement for ten years, by which we retain all the rights we enjoyed before—the use of this large room for the meetings of the Society, and the use of a smaller room for the meetings of Council. We give up the small room upstairs, which was exclusively our own. It was found that the Fellows did not make the use of it as a library as was anticipated, and it was altogether an unnecessary expense. From the end of September last our rent is £52 10s. per annum—a saving of 70 guineas. The remaining items are all small, and do not call for

The British Gynaecological Society.

Dr.	RECEIPTS AND EXPENDITURE FOR THE YEAR ENDING DECEMBER 31, 1896.		Cr.	
	£	s. d.	£	s. d.
To Balance brought forward December 31, 1895	...	189 17 11	...	281 16 3
„ Fellows' Subscriptions
„ Sale of American Edition of Journal	...	387 3 0	...	96 17 6
„ Advertisements in Journal	...	73 10 0	...	52 10 0
„ Dividends on Investments	...	23 16 5	...	20 3 9
„ Interest on Deposit at Bank...	...	10 12 7	...	3 0 0
„ Sale of Furniture	...	0 19 8	...	1 6 0
	...	4 0 0	...	10 11 5
				1 1 0
By Cost of Journal, Notice of Meetings, &c.	3 3 0
„ Rent and Attendance (3 quarters)	0 11 6
„ Honorarium to Editor	2 1 0
„ Reporting and Sub-Editing	9 9 1
„ Illustrations	198 1 1
„ Printing New Lease	9 8 0
„ Refreshments and Attendance
„ Collector
„ Subscriptions Returned and Not Credited
„ Bank Charges
„ Valuation and Moving Furniture
„ Stationery, Postages, and Petty Expenses
„ Balance at Bank
„ „ in Hand
				£689 19 7

We hereby certify that we have examined the above account with the counterfoil receipt books and vouchers in connection therewith, and find it to be correct. We also certify that the Society holds the following securities: £270 Grand Trunk Railway 4 per cent. Debenture Stock, £5 Caledonian Railway 4 per cent. Preference Stock, and £100 on deposit account with the London and County Banking Company.

HEYWOOD SMITH, } *Auditors.*
C. H. BENNETT, }

comment. The balance at the end of the year amounts to £207 9s. 1d., about £20 in excess of what we started with in January. The investments of the Society are the same as before.

Dr. PURCELL proposed a vote of thanks to the Treasurer for his very lucid statement of accounts. It was gratifying to hear that they had a new lease for ten years, as this would add to their stability. As regards the change of editorship, they had no reason to complain of the way the Journal had been brought out.

Dr. BENNETT seconded the motion. As one of the auditors he could say that they hoped that Dr. Mansell-Moullin would long continue as Treasurer. It had been a pleasure to Dr. Heywood Smith and himself to go over the accounts, which were perfectly correct.

The PRESIDENT, in putting the vote to the meeting, said they were all grateful to Dr. Mansell-Moullin for keeping an office which was so laborious and took up so much time.

The motion was carried with acclamation.

Editor's Report.

The Journal during the last year sustained a loss such as must be severe for any journal, viz., that of its very capable and hard-working late Editor (Dr. Leith Napier), through whose unremitting exertions during the previous three years it has so much advanced in value and reputation.

To attempt to follow such an Editor was no mean task, and it was almost impossible that all the threads he left behind should be gathered up intact. Still, as all those Fellows who so cordially assisted him in times past, have expressed and showed their readiness to continue their labours in the interests of the Journal, it becomes possible for me to present a favourable report of the whole year.

The Society's proceedings have been recorded in the usual excellent verbatim form by Dr. Giles, and it is hoped that Fellows will take full advantage of the proofs sent to

each speaker to ensure those reports being accurate, and a true representation of the opinions of the speaker.

The specimens shown are too numerous to allude to. Valuable papers were read, among which may be especially mentioned those of Dr. George Keith on "The Permanent Cure of Antelexion by Operation;" Mr. Mayo Robson on "Ventre-fixation and Ventre-suspension of the Uterus;" Dr. Macnaughton Jones on "Notes of Gynæcological Cases;" Mr. W. Armstrong on "The Latent Gout of the Menopause;" Mr. Bowreman Jessett on "Early Diagnosis of Malignant Disease of the Body of the Uterus;" and Dr. Purcell on "Fibro-Myomata removed by Pan-hysterectomy."

The original articles have been more numerous and most interesting. The subjects of these contributions were: "On the Morphology of Uterine Cancer," by Mr. W. Roger Williams; "On Perforation of the After-coming Head, an Analytical Digest," by Dr. J. J. Macan; "Uterine Fibromata in relation to Accouchement," by Dr. P. Puech, of Montpellier; "On the Value of Rectal Exploration as an aid to Diagnosis in Diseases of Children," by Dr. George Carpenter; "On the Use of Anæsthesia in Obstetric Practice," by Mr. H. Bellamy Gardner; "Note on the Administration of Animal Extracts and Allied Substances during the Menopause," by Dr. Leith Napier; "Report of the Work done in the Gynæcological Department of St. Vincent's Hospital, Dublin," by Dr. Alfred J. Smith; "Vagino-Fixation of the Uterus," by Dr. J. J. Macan; "A Clinical and Pathological Summary of Deciduoma Malignum," by Dr. H. Macnaughton Jones.

The reports of clinical cases too, have somewhat advanced in number, and have all been of a most useful as well as interesting character. There must be many more such occurring in the practice of the Fellows which might be recorded with great advantage to the Society, and without much labour. I would beg to draw the attention of the Fellows to this feature of the Journal. They included a

"Case of Extra-Uterine Pregnancy ; Operation at Eighth Month ; Child lived Six Hours ; Placenta removed during Sixth and Seventh Week ; No Hæmorrhage ; Recovery," by Dr. David Hardie ; "Case of Uterus Bicornis Septus," by Dr. F. Edge ; "A rarely recognised Complication in the Convalescence from an Abdominal Section," by Dr. John Shaw ; "Notes of Three Cases of Total Hysterectomy," by Mrs. Scharlieb ; "Notes of Three Cases of Fibroid Tumours of the Uterus complicated by Pregnancy and Treated by Operation," by Mr. Rutherford Morison ; "Three Cases of Ectopic Gestation," by Mr. Rutherford Morison and Dr. Lionel Calthrop.

The reports, reviews and summaries have been carried out on the same lines as heretofore, and the latter department especially has markedly developed, thanks to the combined labours of Dr. Edge, Dr. Hebert, Dr. Macan, Dr. Leith Napier, Mr. Taylor, Dr. Travers and others. In view of the value of these summaries of the work of contemporary gynæcologists, it is intended to somewhat extend this department in future, in order to make it as useful and complete as possible.

The American edition will be discontinued for the present, as Messrs. Hirschfeld are unable to continue the existing arrangement.

I have in conclusion only to add that any suggestion for the improvement of the Journal would receive most careful consideration, and any practical assistance from a wider circle of Fellows would be most heartily welcomed.

F. F. SCHACHT, *Editor.*

The PRESIDENT said that they had heard the report of the Editor, who took up the duties at a short notice, and thought they would all agree that the Council had done well in nominating Dr. Schacht definitely to the Editorship. He proposed a hearty vote of thanks to Dr. Schacht.

Dr. SAVAGE seconded the motion.

Dr. PURCELL desired that the vote of thanks should be extended to their sub-editor and reporter, Dr. Giles.

The PRESIDENT assented, and the motion was carried unanimously.

Dr. SAVAGE proposed a vote of thanks to the retiring officers. As regards the President, they all felt that his tenure of office had been characterised by courtesy, dignity, and hospitality, and under his rule the Society had gained in position and in public favour. It was interesting to look back and compare their position with that of ten years ago; the Society was then looked at askance and with marked disfavour, now it was recognised as one of the foremost Societies, and as doing good work. Dr. Godson had done much to further this. As regards the other officers, it was a great satisfaction that they retained the services of several of them, whilst they looked forward with confidence to the services which Dr. George Keith would give.

Dr. HEYWOOD SMITH, in seconding the motion, observed that one of the best points in connection with Dr. Godson's term of office was that he had been able to overcome the unfriendly attitude of some of the medical journals towards the Society.

Dr. SAVAGE put the motion to the meeting, and it was carried with enthusiasm.

Dr. GODSON replied on behalf of the retiring officers, and said that they all heartily appreciated the vote of thanks. For himself, he thanked the mover and seconder for their too flattering remarks. It had been a great pleasure to him to serve the Society as President, and as he was to continue as an officer of the Society, he should still do his utmost to further its interests.

The scrutineers, Dr. DINGLEY and Dr. HODGSON, announced that as the result of the ballot, all the officers nominated by the Council had been duly elected :—

Honorary President.—R. Barnes, M.D., F.R.C.P., London.

President.—Professor A. W. Mayo Robson, F.R.C.S., Leeds.

Vice-Presidents.—G. G. Bantock, M.D., London; C. H. Bennett, M.D., London; Professor J. W. Byers, M.D., Belfast;

Å. E. Cordes, M.D., Geneva ; G. Elder, M.D., Nottingham ; H. Macnaughton Jones, M.D., London ; Leith Napier, M.D., Adelaide ; Professor W. L. Reid, M.D., Glasgow ; C. H. F. Routh, M.D., London ; F. F. Schacht, M.D., London ; W. Travers, M.D., F.R.C.S., London ; Professor Hector Treub, M.D., Amsterdam.

Treasurer.—J. A. Mansell Moullin, M.D., London.

Council.—W. Armstrong, M.R.C.S., Buxton ; Dudley W. Buxton, M.D., London ; T. Kilner Clarke, F.R.C.S., Huddersfield ; E. Tenison Collins, F.R.C.S., Cardiff ; W. Dingley, M.R.C.S., London ; A. Donald, M.D., Manchester ; F. Edge, M.D., Wolverhampton ; C. Godson, M.D., London ; F. N. Haultain, M.D., F.R.C.P.Ed., Edinburgh ; W. Balls Headley, M.D., F.R.C.P., Melbourne ; P. L. Hebert, M.D., London ; R. A. Hodgson, M.R.C.S., London ; F. Bowreman Jessett, F.R.C.S., London ; Skene Keith, M.B., F.R.C.S.Ed., London ; Henry Lewis, M.D., Folkestone ; R. Marsden Low, M.B., London ; J. J. Macan, M.D., London ; Christopher Martin, M.B., F.R.C.S., Birmingham ; James Oliver, M.D., London ; H. W. F. Powell, F.R.C.S.Ed., London ; T. Savage, M.D., F.R.C.S., Birmingham ; Professor A. J. Smith, M.D., Dublin ; D. Thomson, M.D., London ; W. S. Wyman M.D., F.R.C.S., London.

Editor of Journal.—F. F. Schacht, M.D., London.

Honorary Secretaries.—John Shaw, M.D., London ; George E. Keith, M.B., London.

The PRESIDENT then delivered a valedictory address.

VALEDICTORY ADDRESS.

BY CLEMENT GODSON, M.D. Aberd., Consulting Physician to the City of London Lying-in Hospital, late Assistant Physician Accoucheur to St. Bartholomew's Hospital, &c.

GENTLEMEN,—It has been customary at this meeting of the Society for the outgoing President to deliver a Valedictory or Farewell Address, and the subject not in-

frequently taken has been a review of the work done by the Society during the past year. Your last two Presidents, Professor Savage and Mr. Jessett, adopted this plan, and last January in my address—not a valedictory one, however, owing to your having paid me the compliment of electing me to occupy the chair for a second year—I followed their example. But now, in order not to make this appear an established custom, I am taking a different course. One of your former Presidents, Dr. Grigg, Physician to Queen Charlotte's Lying-in Hospital, at the end of his Inaugural Address, said "the lateness of the hour prevents my touching upon the question of the influence of antiseptics during parturition. I believe that it will be found that antiseptics have revolutionised the rules of obstetric practice." Another of your past Presidents, Dr. Bantock, quite recently writes:¹ "He asks me to explain the marvellous effects of the antiseptic method in midwifery practice; I say they are due to the adoption of the principle of cleanliness, and on the contrary side would call his attention to the large number of deaths due to poisoning by corrosive sublimate which medical literature affords." The opinions of your two past Presidents are so at variance with one another, that I thought I could not do better than take up this subject for my address this evening, and give you some account of the City of London Lying-in Hospital, and the results to the patients, which have not yet been published except in the annual reports of the hospital, in order to corroborate the testimony given respecting the General Lying-in Hospital since corrosive sublimate was introduced there as an antiseptic by Sir John Williams and Dr. Champneys in May, 1884, who followed the example which had been set by Dr. Tarnier in the Maternity Hospital in Paris.

It was the publication of the admirable results obtained by the physicians at the General Lying-in Hospital that decided us to discard carbolic acid in favour of corrosive

¹ *Medical Press and Circular*, November 18, 1896.

sublimate as our antiseptic, when the City of London Lying-in Hospital was re-opened on July 1, 1886, after having been closed for a short period for thorough cleansing, as was the annual custom. The strength of the solution used was 1 in 1,000 for the hands of the attendants, and 1 in 2,000 for vaginal irrigation. I gave a full account of how it was employed in a lecture I delivered at the Midwives' Institute and Trained Nurses' Club on October 14, 1887, which was subsequently published and distributed among the midwives and nurses in pamphlet form ; and, except in small details, it has been used in the same manner up to the present time—December 31, 1896, just ten and a half years—on 4,608 women, without a suspicion of mercurial poisoning in one.¹ Therefore I think we may at once dismiss the idea of any risk of poisoning in the way in which it is now used, and should be used, and it will probably be found that what Dr. Bantock refers to, relates to when intra-uterine injections were employed of a strength of 1 in 1000, or stronger, such as those reported by Dr. Dakin in a paper on Mercurialism in Lying-in Women undergoing Sublimate Irrigation, read at the meeting of the Obstetrical Society of London in December, 1886. Dr. Dakin brought the subject forward not with the view of advocating the discontinuance of its use, but to endeavour to elicit the best means of employing it with safety, for he says, "the results at the General Lying-in Hospital have been such as to make the physicians loth to dispense with it."

In an admirable address² by Dr. Cullingworth on "Puerperal Fever a Preventable Disease," he says : "Until the year 1877 this hospital [the General Lying-in Hospital] was scarcely ever free from puerperal fever, and the mortality,

¹ A vaginal douche of 1 in 2000 at a temperature of 115° is given immediately after the delivery of the placenta, and three similar douches subsequently at intervals of night and morning ; then iodine douches are given instead of sublimate.

² Delivered at St. Thomas's Hospital, London, and published by J. and A. Churchill, 1888.

always high, occasionally became fearful. In 1838 of 71 women delivered 19 died ; in 1861, 14 died out of 195 ; and in 1877, 9 out of 63. On several occasions the hospital had to be closed for long periods, and thousands of pounds were spent on the sanitary improvement of the building. In October, 1879, this institution, having been closed for two years, was re-opened, and has since been conducted on antiseptic principles, the details varying from time to time as increased knowledge and experience have dictated. Mark the result," and he gives the following table :—

Period.	Deliveries.	Deaths.	Average Death-rate from Causes.
1833 to 1860	5833	180	1 in $32\frac{1}{2}$ = 3·088 percent.
1861 to 1877	3773	64	1 „ $58\frac{1}{2}$ = 1·696 „
1880 to 1887 — antseptic period	2585	16	1 „ $161\frac{1}{2}$ = 0·618 „

This last period of eight years takes in three varieties of antiseptics used, first carbolic acid, next permanganate of potash, and finally corrosive sublimate. Dr. Boxall, in a masterly paper read at the June and July, 1890, meetings of the Obstetrical Society (which I recommend to the attention of you all) gives another period, from the time corrosive sublimate alone was used—May 1, 1884, to June 30, 1889, 2,150 deliveries 9 deaths, 1 in 239 = 0·418 per cent.—a much greater diminution in the death-rate.

I propose to constrast the results at the City of London Lying-in Hospital from the time that I became connected with it, in March, 1870, up to the end of April, 1886—a period of sixteen years—with that commencing July 1, 1886, when corrosive sublimate as the antiseptic came into use there, up to December 31, 1896—a period of ten and a-half years—and I think you will find that it thoroughly bears out what Dr. Cullingworth has said in his address, and what Stadfelt of Copenhagen has expressed, his opinion being emphatically endorsed by Dr. Boxall in his paper to which

I have referred—"the belief that the hygiene of a maternity depends less upon its construction and its age than upon the hygienic principles upon which it is directed, and upon the perseverance with which these principles are carried out in the daily practice." For you will learn that while structural alterations failed to improve the condition at the City of London Lying-in Hospital, hygienic principles and markedly the employment of corrosive sublimate, produced an extraordinary change for the better.

I will say a few words about the hospital itself, and my connection with it. The present building was erected in the City Road, at the corner of Old Street, in 1771, and was opened for the reception of patients on March 31, 1773—so that it is 124 years old. There is not now, nor has there ever been, a house surgeon; the chief resident is termed matron and midwife. There is only one medical officer in charge, who resides in the neighbourhood and visits the hospital daily and whenever required. He is termed the surgeon-accoucheur. I took over the duties of this office in March, 1870, though I was not permanently appointed to fill it till the following July. There are two other medical officers, a consulting physician and a consulting surgeon. These are not complimentary honorary appointments as the term "consulting" often implies. The surgeon-accoucheur is expected to call to his aid the consulting physician whenever he is in difficulty in a delivery, or in any case of serious illness, and he has the consulting surgeon to appeal to in any case that is surgical outside midwifery and gynæcology. Both these medical officers have a seat on the managing committee. I resigned my appointment of surgeon-accoucheur in 1871, and in 1872 was elected from among the governors a member of the committee of management, the meetings of which I attended as regularly as possible up to July, 1881, when Dr. Greenhalgh resigned his office of consulting physician, and I was appointed in his place, so that it will be seen that for nearly twenty-seven years I have taken an active part in the affairs of the hospital.

In 1870, when I took over the medical charge, the patients were dying in the proportion of one in nineteen—twelve deaths occurring among the 227 women delivered—so that as soon as possible, seconded by Dr. Greenhalgh, I appealed to the committee to close the hospital. Its doors were shut on June 15 for three months in response to our entreaty. I immediately set to work to endeavour to discover the defects and get them rectified as far as possible, and what was done is recorded in the Annual Report for 1870. “Your committee have had the building painted and coloured throughout, have done away with all the old bedsteads, and replaced them with iron ones without curtains. Palliasses and hair mattresses have been provided in the place of the old feather beds, and all other furniture likely to retain infection has been removed. In fact, the wards have been almost entirely re-furnished. Your committee have also had all the drains opened and double trapped at all the gratings and down spouts, and all cesspools filled with concrete. The wards have been thoroughly fumigated with chlorine gas, and every means has been used to get rid of all infection.” The result was that, from the re-opening on September 21 to the end of the year, 103 women were confined with only one death, reducing the mortality for the whole year to one in twenty-five. In 1873 it was one in fifty, and in 1876 and 1877, the two years taken together, one in forty-five, so that, on November 24, 1877, the medical officers again appealed to the committee to close the hospital. This was done on December 1. “It was resolved that Dr. de Chaumont, of Netley, be requested to inspect the hospital, and report on the ventilation and drainage with a view to their improvement.” The result of this was that great alterations were made, at an outlay of upwards of £4,500. The hospital, in its re-constructed form, was re-opened on April 16, 1879, after having been closed for sixteen months—and with what result? 287 women were delivered during the remainder of the year with only one death. But what a crushing disappointment came next year (1880); twelve

deaths among 388 women delivered—one in thirty-two ; and eleven of these were in the first half of the year, out of 196 deliveries—one in nineteen. Does not this bear out the opinions I have expressed in the earlier part of my address as to structural improvements ?

In the following year, 1881, there was again a large expenditure in this way, nearly £600, and with what result ? At a meeting of the committee held on April 28, 1882, the medical staff reported that the sanitary condition of the hospital was very unsatisfactory, and recommended that it be closed at once. The committee then resolved forthwith to act upon the advice of the medical officers, and appointed a sub-committee to inquire into the cause of the evil complained of. After several meetings the sub-committee presented a report to a special Court of Governors on June 2, recommending that the hospital be pulled down and rebuilt. Fancy this, after a recent expenditure of upwards of £5,000 on the buildings. The special court, however, took exception to this report and passed a resolution appointing a sub-committee from among the governors to co-operate with the committee of management "to report upon the present system of management adopted at the hospital." After several meetings the following report was presented : "It is recommended that the hospital be thoroughly inspected as to sanitary arrangements, and that it be at once cleansed, whitewashed, &c., and re-opened as soon as possible, and that it be closed for thorough cleansing for a month every year. That the back part of the hospital be pulled down and a one-storeyed building be put up, together with other alterations, at a cost not exceeding £1,000." This was done and the hospital was partially re-opened on October 1, after having been closed for five months.

But, little more than five months later, on February 17, 1883, in consequence of the unhealthy state of the wards, the committee, on the recommendation of the medical staff, again closed the hospital and appointed a sub-committee to inquire into the sanitary condition of the hospital generally.

Their report was to this effect : " that as far as the construction of the hospital is concerned, no alteration is required. That certain improvements recommended by Dr. Pavy, the medical officer of health, be effected as regards the soiled linen shoots. That the wards be at once disinfected, cleaned and whitewashed, and that the hospital be re-opened as soon after April 1 as possible." There were some other less important recommendations. The hospital was re-opened on April 20, and between that date and the end of the year 209 women were delivered with but two deaths, one in 104, and yet in the two years, 1882-83, taken together, the mortality rose to no less than one in twenty-three. In 1884-85 combined it was one in forty-eight. In 1886, up to the closure, on May 14, three women died out of the 133 delivered, one in forty-four, and now we come to the period when the sublimate treatment commenced.

From the re-opening under its beneficial influence on July 1, 1886, to September 30, 1887, 420 confinements took place without any death. From the same date, July 1, 1886, to December 31, 1896 (ten and a half years), 4,608 women were delivered with 11 deaths : mortality 1 in 419, or 2·387 per 1,000. From January 1, 1892 to December 31, 1896 (five years), 2,392 deliveries with 3 deaths—1 in 797—or 1·250, *i.e.*, 1½ per 1,000, and these deaths were : (1) Sudden death in 1893 from pulmonary embolism on the third day after delivery (patient had shown no signs of illness up to the occurrence ; and the report of the necropsy by Dr. Tooth, Demonstrator of Morbid Pathology to St. Bartholomew's Hospital, was " embolism of the pulmonary artery ; no septic condition present.") (2) The second death occurred in 1894, from puerperal eclampsia, and took place on the third day after delivery. (3) The third death occurred in 1895 from puerperal eclampsia the day after delivery. So that we have in 1892, 487 deliveries with no death ; in 1893, 430 deliveries with 1 death from pulmonary embolism ; in 1894, 492 deliveries with 1 death from eclampsia ; in 1895, 490 deliveries with 1 death from

eclampsia ; in 1896, 493 deliveries with no death. Such a low rate of mortality as this one cannot expect to maintain, when it becomes a matter of fortune how many deaths from non-preventable causes may arise, such as the three from eclampsia and pulmonary embolism met with in the last five years. Only on December 26 last, I was called to the hospital to a severe case of eclampsia ; the patient has happily recovered, but had she died it would not have enabled me to say we had had no death in the year 1896, and it would have increased the rate of mortality in the last five years.

Thus it will be seen that in the last five years among 2,392 deliveries, there has been no death in which septicæmia could have borne any part ; and there has been also very little illness during this time. In the past year I have only been asked to see one patient who had a high temperature, and she was discharged quite well. I am assured that all the patients have been in a satisfactory state of health before they were allowed to leave the hospital. A total mortality of $1\frac{1}{4}$ per 1,000 is, indeed, I think, something to be proud of—5 in 4,000—and no death from septic causes. This seems to justify the title of Dr. Cullingworth's address, "Puerperal Fever a Preventable Disease" ; rather different to the time of my introduction to the City of London Lying-in Hospital, when 1 in 19 was dying.

I do not dispute for one instant the great share that cleanliness plays in these results. My late colleague, Dr. Matthews Duncan, spoke of antiseptic precautions as transcendental cleanliness.¹ He had, he said, always defended the good or the better hospitals, and he was proud to know that now, when thoroughly antiseptically managed, they needed no defence. Their mortality was equal to, if not less than, that of private practice. During his whole life he

¹ *Transactions of the Obstetrical Society*, vol. xxvii., p. 215. Discussion on Dr. (now Sir) W. O. Priestley's paper, "Antiseptics in Lying-in Hospitals."

(Dr. Matthews Duncan) had watched the generous and persevering attempts of his brethren to improve midwifery hospitals. Long ago, in Dr. Rigby's time, he came to London and saw a great ventilating scheme which was to work wonders. Architectural arrangements, drainage, ventilation, segregation, and drugs had all been tried and all without securing success. The mortality in hospitals was terrible. He did not know what it was in private practice; probably it was as bad, or nearly as bad, as in big hospitals. Antiseptics, and antiseptics alone, had brought success and had sustained success. It was, he knew, common in highly respected quarters in London to attribute this modern success or diminished mortality in general hospitals, as in lying-in hospitals, to many factors—to improved feeding, housing, cleanliness, nursing, and antiseptics; and no doubt all were important, but all had failed till the antiseptic era, and all would fail again were antiseptic precautions—transcendental cleanliness—neglected. In his valuable book, "*Mortality of Childbed and Maternity Hospitals*,"¹ Dr. Matthews Duncan says: "In a well-managed hospital they die at the rate of 1 in 100; all the country over, the mortality is probably not much less, in the best private practice it appears to be greater." "In the years of my private practice of which I have preserved records I find 8 deaths in 736 cases, or 1 in 92." This was written in 1870, before antiseptic midwifery came in practice.

Why the sublimate treatment should not be adopted in private practice as well as in hospitals I am at a loss to understand. In my lecture to the midwives that I have spoken of, given in 1887, I gave them a list of what I order to be ready in the house of every patient who expects me to attend her in her confinement, and amongst the things was what would make half a gallon of sublimate solution (1 in 1,000), labelled "To be used with an equal part of hot water as a lotion"; and I have continued this, very much to my

¹ Edinburgh: A. & C. Black, 1870, p. 116.

satisfaction, ever since, and I have used the irrigation just as in the hospital practice, and have never seen a sign of mercurial poisoning. In July, 1881, I had the great misfortune to lose my first private patient, and from puerperal septicæmia. This was before the days of sublimate and sterilising instruments, but not before the introduction of other antiseptics, and every precaution had been taken by the use of carbolic lotion and carbolised cream. It was a forceps delivery after forty hours' labour in a primipara; an occipito-posterior presentation; and the perineum was partially ruptured. She became feverish after a rigor on the fourth day and died on the thirteenth day after delivery. The most unremitting attention failed to save her life. I cannot tell you the distress the loss of this patient—a young wife—caused me. Only those of you who have had similar losses can realise what it was. I told you in my address last January of a case of puerperal peritonitis in a patient delivered in December, 1890, who was attended by me under the most strict sublimate lines. It was a genuine case of acute septic peritonitis occurring a few hours after delivery, and although no necropsy was made, I feel convinced, from the reasons I gave you, that it was caused by rupture of a pyosalpinx, as in those cases narrated by Dr. Michie, of Nottingham, in his paper read before this Society in May, 1885.¹ If this case be excepted, no case of septicæmia has occurred in my private practice since I commenced the use of corrosive sublimate. It gives me a feeling of protection I cannot over-estimate. I feel sure if its employment in midwifery were generally adopted by practitioners for their hands and for vaginal irrigation, the Registrar-General's reports of the mortality from puerperal septicæmia would very soon show a difference, and in these days of portable compressed drugs there is no reason why it should not be almost universally used, even among the very poor. To my

¹ "Pregnancy Complicated by Suppuration in the Pelvis."—BRITISH GYNÆCOLOGICAL JOURNAL, 1895, p. 160.

mind it would be a great pity if Dr. Bantock's recent reference to mercurial poisoning were to deter practitioners from employing it. It is only right, however, that it should be pointed out to them what may result if it be *improperly* used.

In the annual report of the General Lying-in Hospital for 1883 the medical report, signed by Dr. (now Sir John) Williams and Dr. Champneys, says that 342 women were confined, of whom 3 died (1 in 114), 2 from septicæmia, quite independent of one another, "a percentage which testifies to the healthy condition of the hospital." This was during the time that antiseptics were employed there, but, you will note before the corrosive sublimate was commenced, and the committee add in presenting this medical report to the governors: "The committee beg to tender their congratulations to the eminent surgeon to the hospital, Sir Joseph Lister, Bart., to whom this and other institutions are so much indebted for the satisfactory medical results obtained through the system with which his name is associated."

Sir William Priestley concluded his paper read before the Obstetrical Society of London in July, 1885, entitled "Notes of a Visit to Some of the Lying-in Hospitals in the north of Europe; and particularly on the Advantages of the Antiseptic System in Obstetric Practice," with these words: "Ample funds and sufficient space are necessarily most potent aids in waging warfare with disease in hospitals, but, even with limited means and space, absolute cleanliness, *supplemented by the antiseptic system*, may in our own country have a large influence for good, and the labours of our illustrious Lister prove of equal value to the obstetrician as to the surgeon. If I am not mistaken some of our Fellows," says Sir William Priestley, "can tell us of triumph of this kind in the lying-in hospitals of London." I hope you will think that I have this evening succeeded in doing so.

I feel that I cannot conclude my address better than by

saying that though numerous peerages have been conferred upon those "waging warfare" resulting in the *destruction of life* and victory (!) never has one been more worthily bestowed than on "our illustrious Lister" for the victory gained by him in "waging warfare with disease in hospitals," resulting in such an enormous *saving of life* among our fellow creatures.

I cannot sit down without congratulating the Society upon its selection of my successor in this chair. Professor Mayo Robson will fill it, I am sure, with dignity, eloquence, and good judgment, that have never, at all events, been surpassed by any of his predecessors.

In bidding you farewell, I thank you all for the kindness you have displayed towards me and the assistance you have given me during the two years that I have presided over you, a period in my life of which I shall always have the happiest recollections.

Mr. BOWREMAN JESSETT said that the Society was to be congratulated on the fact that the President had departed from the practice of previous presidents, of giving a review of the year's work ; and had given them in its place the valuable paper which they had heard. It was a paper that would carry weight ; and governors and others connected with hospitals would refer to it. For though the paper dealt with antiseptics in lying-in hospitals, the same treatment had to be carried out in all branches of surgery. He had read, as no doubt many had done, the correspondence in the *Medical Press and Circular*, in which each party seemed to have established its position to its own satisfaction ; but the paper they had just heard showed that the same good results could not have been brought about without antiseptics. For the same Medical Officer attended at successive epochs ; and they might be sure that he and the nurses were most careful as to cleanliness ; the buildings were frequently altered, and yet no good results followed till the introduction of corrosive sublimate. Then the mortality dropped. The President had felicitously referred to Lister's

work in this connection, and they all could not but feel gratified that the Queen and country had recognised it in conferring a well-earned distinction. He moved that a hearty vote of thanks be given to the President for his excellent address, and that he be asked to allow it to be printed in the Journal of the Society.

Mr. TAYLOR (Birmingham), seconded the motion, which was carried with acclamation.

SPECIMENS.

Dr. H. M. MACNAUGHTON-JONES showed for his father, Dr. Macnaughton-Jones, a microscopic section and drawing of a specimen of "*Deciduoma Malignum*."

Mr. JOHN W. TAYLOR showed two specimens of pan-hysterectomy. He said :—

Various methods—and subsidiary methods—of doing pan-hysterectomy have been described, but three methods stand out particularly as sufficiently original and diverse to merit the term of distinct operations.

The first of these is that of Professor Martin and his followers, in which the broad ligaments are ligatured on both sides before the removal of the uterus or uterine tumour. This has been brought before the notice of the Society by Dr. Smyly, in 1892, then by the admirable work of Mr. Jessett, and by the cases of Dr. Mansell Moullin in 1894, myself in 1895, and Mr. Purcell, in December last.

The second method is that of Professor Doyen in which the uterus (and uterine tumour) is completely removed without any previous ligature or hæmostasis, and which, for its boldness, simplicity, and perfection, when well done, will command, I believe, the highest place as *the* operation for the removal of large uterine myomata. Specimens removed by this method have already been shown to the Society by myself and Dr. Edge, and I have brought to-night another myomatous uterus removed in this way, the history of which I will give later on.

The third method is that of Dr. Kelly. In this, ligatures are used, but the broad ligament is tied from above downwards on one side only, and the surgeon successively pushes his way from this side into the pelvis, opens the vagina, isolates the cervix, and then mounts upwards on the opposite side, tying the vessels and peeling out the tumour until finally the upper part of the opposite broad ligament is secured and the tumour is set free.

This is peculiarly adapted for the removal of deep broad ligament tumours involving the uterus, and in a certain number of cases requiring operation, will be found exceedingly valuable.

I have two specimens removed by abdominal pan-hysterectomy to show this evening. The first is a myoma of the uterus, together with the appendages of each side, removed by Doyen's operation. The patient was a lady, aged 33, who had been operated on, four years previously, by another surgeon for the same disease. At this operation a large myoma, weighing some five or six pounds, was removed by the clamp operation. The patient made a good recovery, and remained well for nearly two years afterwards. About this date, signs of recurrence of further growth began to appear; the growth gradually extended, and when I saw her in December last, the abdomen was again filled by a large tumour, which already reached the costal margin. She was much disappointed at the temporary result of the previous interference, and wished, if operation were again accepted, that it should be radical and curative. Her general condition was very good, and her only complaint, beyond the enlargement, was dysuria. On passing a sound into the bladder, the point of it could be felt immediately under the clamp cicatrix, which was two or three inches above the pubes, and the altered position and relations of the bladder appeared to be the main disturbing element in planning the operative details for the removal of the tumour.

On January 4, after previous thorough cleansing of the abdomen, vulva and vagina, I opened the abdomen in the

line of the old cicatrix, and by an extensive incision reaching half way between the umbilicus and ensiform cartilage, removed the tumour from the abdomen.

Practically, the whole of the uterus appeared to have been retained by the patient, as the appendages of both sides were discovered beneath the greater mass of tumour.

The patient was placed in the Trendelenberg position and the pouch of Douglas opened from the abdomen into the vagina on the blades of a pair of forceps introduced from below. The cervix was seized with volsella (through this opening) and rapidly dissected away from its attachments by scissors, the bladder being pushed away from below upwards, as soon as the vagina had been detached from the cervix. The cervix being now set free from all its connections, as you see it in the specimen, the right broad ligament was cut off from the side of the tumour, while its base was held by my assistant, Mr. Jordan. No bleeding occurred, and on loosening all pressure, only one or two small vessels of the edge began to spurt. These were seized by forceps.

The tumour was now rolled over to the left, the left broad ligament detached, and the tumour removed. The last bit to be separated was the cicatricial adhesion to the abdominal wall and bladder, where the clamp had been. As I had already fully detached the bladder from below, I approached this under favourable circumstances, and the final separation was made without difficulty or danger.

The appendages of both sides were now removed, their bases being ligatured in sections. The peritoneum and vagina were sewn together by a running suture before and behind, and the ends of all sutures were drawn downwards through the vagina by forceps. In this case the flaps left after removal of the appendages were not sufficiently long to permit of complete closure of the pelvic peritoneum, and a gauze drain was left between the abdomen and vagina. The abdominal cavity was thoroughly cleaned, and the wound was closed by silkworm gut sutures.

The patient had no vomiting or distension after the

operation. The bowels were moved on the following morning, and her progress has been satisfactory throughout. The wound appears to have healed completely, and any likelihood of further trouble may be regarded, I hope, as infinitesimal.

The other specimen of abdominal pan-hysterectomy which I have to show this evening is, as you will see, a much smaller one, but is not on that account less interesting.

The patient was a young married woman, aged 23, on whom I had myself operated five years ago for a large embedded tumour of the left ovary. This had gelatinous contents, which had already, to some extent, burst into the peritoneal cavity, causing peritonitis, and the tumour itself seemed on the borderland of malignancy. I found it quite impossible to remove it in the usual way—most of the pelvic portion was enucleated from below the peritoneum, but on reaching the side of the uterus no line of demarcation could be found between the uterus and the tumour. Indeed, the latter appeared to be growing directly into, and from the left side of the uterus. The operation was completed by including the artificial pedicle of the tumour and the left horn of the uterus, together in a wire clamp, or *serre-nœud*, as, at this date, I knew of no better way for treating the condition that I found.

The patient recovered with a utero-abdominal fistula, through which (as a secondary outlet) menstruation for a few times regularly took place. On returning home, however, she almost immediately became pregnant, and as she has had three children during the four years which intervened between her two operations, it has only happened occasionally that she has been (during this time) in other than a pregnant condition. The pregnancies took a normal course, and the labours were uneventful, except that two of these were somewhat premature. I had frequently the opportunity of observing the patient while pregnant, and in the later months, when the uterus became greatly distended, it was quite possible to see the membranes through the (dilated) utero-abdominal fistula.

The dates of the confinements and history of her children are as follows :—The first child was born (at eight months) on September 25, 1893, and lived seven weeks ; the second child was born (at full term) on March 3, 1895, and died of whooping-cough at four months ; the third child was born (at seven and a-half months) on May 25, 1896, and lived ten weeks.

Until quite recently the patient enjoyed excellent health, although some traces of return of the growth have been observed for nearly two years.

In the summer and autumn of last year the tumour again grew rapidly, but with very little, if any, disturbance of the general health until November 6, when (according to the patient's statement) the tumour suddenly burst at the site of the fistula, discharging a large quantity of sanious watery fluid, with severe abdominal pain. The patient became seriously ill, her temperature rose the following day to 105° F., and although the acuter symptoms gradually subsided the patient remained in a hectic condition with evening pyrexia and profuse foul suppuration of the cavity connected with the uterus until her admission into hospital on the 30th.

Forced to act in some way for the relief of the patient, I determined to remove the uterus and tumour together.

On December 2, 1896, I opened the abdomen above the fistula, separated adhesions, and by two elliptical incisions through the abdominal wall cut out the tissues surrounding the fistula. The pelvic mass could now be sufficiently isolated to see that the tumour entirely filled the left side of the pelvis, and that it was inseparable from the uterus. The right broad ligament was healthy, and I accordingly began working on this side. I tied the broad ligament on the outer side of the right appendage, separated the bladder from the front of the uterus, and then made my way by successive ligature and division down this right side of the uterus and into the vagina. The vagina was then cut quite free from the cervix, and the latter being forcibly held up with volsella by my assistant, Mr. Jordan, I began to ligature the lower

cervical attachments of the left side. In this way I managed to secure (I believe) the uterine arteries of both sides before reaching the base of the tumour. As soon as I reached this I had, of course, to give up any further attempts at hæmorrhage before removal. The tumour was pulled and enucleated from its attachments in the pelvis from below upwards, and, much more readily than I expected, I found that I could peel it out completely much as in the condition which you see it this evening except for the alteration and contraction which always follows prolonged preservation in spirit. Some vessels of the upper part of the broad ligament were seized at once with forceps, and the flaps of peritoneum, from beneath which the tumour had been unrolled, were carefully adjusted and sewn together, so as to leave the pelvis clean and free from any exposed raw surface.

The upper ligatures were cut short, while the lower ones (together with a gauze drain) were brought down and out through the vagina.

The abdomen was thoroughly washed out and cleansed, (as it was impossible to keep it quite free from contamination by the discharge during the course of the operation), and a glass drainage-tube was left in the lower angle of the wound, when the incision was finally closed.

The patient had lost but little blood during the operation, and in spite of her grave condition made, with the help of special attention and some champagne during the first few days, a remarkably good recovery.

I have both operation books with me, and it is worthy of notice that whereas in 1892 the operation was made on October 29, and the patient left on December 9, a period of forty-two days or exactly six weeks, in 1896 the operation was done on December 2, and the patient left on December 26, a period of twenty-four days only, and not much more than half the period of her former stay in hospital. I saw the patient this morning; she is walking out nearly every day and is thoroughly convalescent.

Both of these cases of pan-hysterectomy illustrate some

important facts. First, that abdominal extirpation enables us to deal successfully with cases in which the clamp operation is only of limited value and therefore inefficient, and secondly, that there are cases which absolutely need somewhat different operative methods to the method which has been so well worked out by Mr. Jessett, Dr. Smyly, my colleague Mr. Christopher Martin, and others.

The value of Doyen's method not only for its general utility but also for its separation of the bladder from below upwards was of marked advantage in the first of my reported cases, while the method employed in the second was, so far as I can see at present, the only way by which any radical means of treatment could have been carried out.

In looking over Dr. Kelly's paper on "Hystero-Salpingo-Oöphorectomy by continuous incision from left to right or from right to left," published in March, 1896, I find that his description is not that of complete pan-hysterectomy, as he leaves a portion of the cervix and does not open the vagina.

Whether I am original in applying this method to complete extirpation I do not know. I had certainly treated a very similar case in this way before reading Dr. Kelly's paper. There can be no doubt I think that my patient owes a renewed lease of life to this way of treating an otherwise hopeless condition, and as the essentials of the case are by no means unique I am chiefly anxious that others as well as myself should appreciate and, if necessary, utilise a method of operating which may sometimes be of the greatest service.

Mr. BOWREMAN JESSETT said that they must congratulate Mr. Taylor on the successful results of his cases; and the Society might congratulate itself on endeavouring to establish, as it had done for three or four years, that complete removal of the uterus, instead of the use of the clamp, was the best method of hysterectomy. If proof were needed of his last statement, Mr. Taylor's second case was conclusive; for otherwise one or several myomata might be

left behind, needing a second operation. The method of Doyen, and his own, were applicable in different cases; but, in general, he still thought that his own method, of drawing down peritoneal flaps into the vagina, was the better one; otherwise there was a risk of a clot forming between the peritoneum and the vaginal roof. This risk was, however, lessened by the drainage system employed by Doyen. Kelly's operation was new to him; and this was the first time it had been described before their Society. Probably the method adopted by Mr. Taylor was the only one which could have been used in that particular case. They had to thank Mr. Taylor for bringing these cases before them; they could not see too many of such specimens, and it was well to have a variety of methods available to choose from.

Dr. HEYWOOD SMITH thought the chief point in Mr. Taylor's cases was Kelly's operation. From the description it seemed to be easy; but it would appear to be limited in its practical use by the size of the tumour; in the case of a large myoma it would probably be difficult to get the tumour tilted enough to reach the junction of the cervix.

Mr. J. F. JORDAN had had the good fortune to assist Mr. Taylor in the second operation. He had not himself employed this method of Doyen's; but in three cases he had successfully performed abdominal hysterectomy by the ligature. Speaking as one of the younger gynaecologists, he thought they were fortunate in that the battle as to the best method of dealing with uterine myomata had now been almost fought out. To him, complete extirpation seemed the best treatment; of course they had to consider the mortality of each procedure; and so far it would seem that the mortality after total extirpation was not greater than that of other methods, but would rather prove to be less. No doubt each case must be considered on its merits. The drawback of Doyen's method was that it did not appear to be available for cases of myomata blocking up the pelvis; but indeed he was still in doubt as to the manner in which

such cases should be dealt with, when the growth had opened up both broad ligaments.

Dr. F. A. PURCELL observed that Mr. Taylor's paper was an extension of the discussion on hysterectomy which they had at the last meeting. For his part, he did not yet feel bold enough to strip the sides of a myoma and leave the vessels untied till after they had been secured by an assistant. Doyen's plan was at least a rapid one. An allusion had been made to large tumours blocking up the pelvis; in such a case he had adopted the method of separating the broad ligament on each side, slicing the tumour across, and then dissecting the remaining portion out of the broad ligaments, so completing the total extirpation.

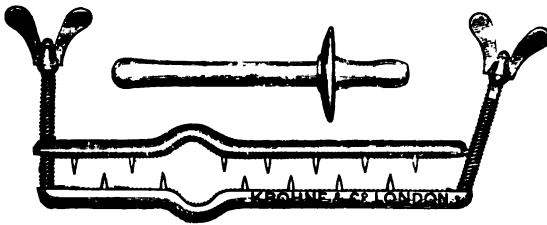
Dr. BEDFORD FENWICK asked for information on two practical points: (1) the time occupied by each operation; (2) the time it took for the separation of the ligatures. The Society was to be congratulated on these cases; for he quite agreed that it was important for them to see as many of them as possible. There was no doubt that they must come ultimately to an intra-peritoneal method; and they were fast advancing in this direction.

Mr. TAYLOR, in reply, said that such operations as he had described must necessarily take some time, varying from a little under one hour to an hour and a half. A careful study of the specimen removed by Kelly's method would answer the questions that might be raised about it. The size of a tumour in the pelvis was necessarily limited by the size of the pelvis itself, and if one side remained healthy and accessible, the size of the tumour above the pelvis would probably not matter much. The worst cases they had to deal with were such as Mr. Jordan had referred to, when the pelvis was blocked on both sides; in such a case Doyen's method might be utilised by reversing the usual order of procedure; that is, by separating the broad ligaments close to the uterus on both sides from above downwards. The usual method (from below upwards) was undoubtedly best whenever possible, and possessed special

advantages for the treatment of those cases in which the connections between growth and bladder could not be conveniently attacked from above.

AN IMPROVED CLAMP FOR COMPRESSING A COLOTOMY SPUR. SHOWN BY F. A. PURCELL, M.D.

This instrument is a modification of Mr. Allingham's, and that of Mr. E. C. Ryall. Its peculiarity is that a circular hole is formed within the blades which admits a gum-elastic rectal tube being passed through and into the bowel during the three days the bowel is compressed, giving



a free vent to flatus. The compressing screws at its ends are fitted with nut-cracker joints, which can thereby be spread out to facilitate its application around the spur. It is made of delta-metal which does not rust or corrode.

The makers are Messrs. Krohne and Sesemann, of Duke Street, Manchester Square, W.


ORIGINAL COMMUNICATION.

GYNÆCOLOGY IN BERLIN.

By H. MACNAUGHTON-JONES, M.D., M.Ch., M.A.O.,
F.R.C.S.I. & E.

THE experience gained by a visit to three of the most important of the *Frauenkliniks* of the German capital is not just at present devoid of many points of practical interest to anyone engaged in gynæcological surgery. Hence, I have thought that this summary of the notes made of my recent daily visits to the operating theatres of Martin, Olshausen, and Landau, could hardly fail to be worth perusal by the readers of this journal. I shall confine any observations to the operative procedures that I saw practised, and the points of surgical interest directly bearing on these. And here let me at once say that nothing could exceed the courtesy with which my German *confrères* received me, and the readiness with which I was permitted to follow up the results of the operations at the bedsides of the patients—a demeanour which had for me personally a peculiar attraction and charm. To Professor Martin, however, I am especially indebted for the kindness with which he arranged to receive me on my arrival in Berlin, and the extreme pains to which he went to demonstrate and explain his reasons for every step taken during those dexterous manipulative surgical feats of the gynæcological art of which he is so worthy and distinguished a master.

The bystander is struck in all his manipulations with that deftness of hand, that certainty, yet lightness of touch, that readiness of resource in unforeseen difficulty, that boldness of execution and independence of action, which at all times



stamp the born surgeon. True it is that in some respects Professor Martin is somewhat conservative, as in the fact that in laparotomy he does not avail himself of the Trendelenburg position. He operates sitting in front of the patient, and the large rubber apron which covers the entire surface of the body in front, together with the rubber sheet which drops at the end of the table from underneath the patient, practically form a funnel by means of which the water used in douching or otherwise finds its way into the trough beneath. His small metal laparotomy table, divisible into three parts, itself stands in a large metal trough. In operations on and through the vagina, such as hysterectomy, colpotomy and hysteropexy, and colporrhaphy, the parts are douched from time to time with sterilised fluid, projected by the hand from a bottle, a procedure which is entrusted to the tactful and ready hand of his female assistant, Frau Horn. She also it is who threads his needles, hands him every instrument or appliance, and, with the alertness and accuracy born of a huge experience, seems to

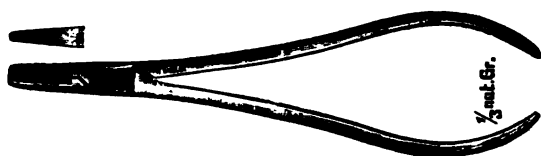


FIG. 1.—MARTIN'S NEEDLE-HOLDER.

anticipate, as she stands at his side and a little behind him, his every want even before it is expressed. In all Professor Martin's manipulations it is noticeable that he uses none save his own curved needles, held in his long needle-holder, which is strong, but without any catch, and it is in the working of these needles in almost impossible situations, in carrying sutures and ligatures, that the skill of the operator is specially shown.

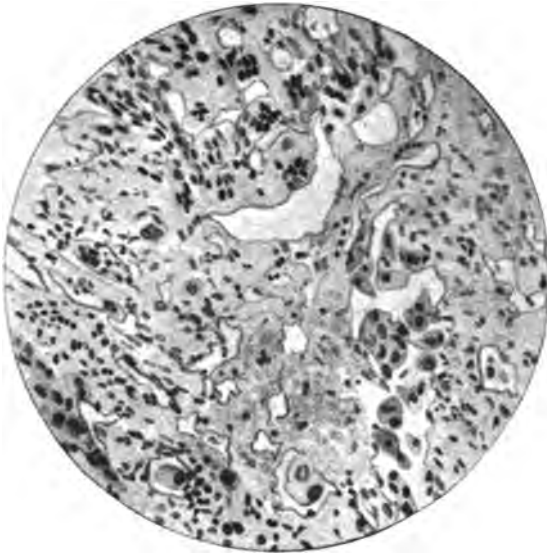
A word now generally as to the aseptic precautions which I saw observed in the three *Kliniks* I have above referred to. I might take the University *Frauenklinik*, of

which Professor Olshausen is the chief, as the type of the strictest aseptic observance. In all three, vaginal operations and vaginal hysterectomy are performed in a different room to that in which laparotomy is carried out, and strict precautions are observed as regards the clothing of visitors and onlookers in the latter. Coats are removed, linen jackets and aprons are substituted, and Professor Martin uses a combination overall which covers the body from the neck to the feet. The laparotomy rooms are composed of tile, glass, and metal.

In Martin's *Klinik*, the patient is shaved, disinfected, and placed under chloroform in an adjoining room, before being carried into the laparotomy theatre.¹ Repeated and thorough ablution of the arms, hands, and nails, and washing of these with a solution of 1 in 1,000 of perchloride of mercury, to which in the Elsasser Strasse absolute alcohol is also added, is practised. This is no mere perfunctory washing, but a thorough and prolonged scrubbing. The abdomen of the woman is also thoroughly cleansed in a similar manner, and covered with a wet antiseptic cloth in which a circular aperture is cut. Everything used in the operation is sterilised. Only one person hands or touches the instruments and threads the needles, the sutures and ligatures being carried direct from the sterilising fluid. Martin mainly uses gut specially prepared for him by his assistant, Frau Horn (to be had of Boehme, 54 Orianburger Strasse), which is soaked from six to eight hours in 1 in 1,000 sublimate solution, and then placed for twenty-four hours in a solution of two parts of oil of juniper, and one of absolute alcohol, being then transferred to a similar solution, in which it is kept fourteen days before use. Alongside the operator is placed a basin of the antiseptic fluid for occasional dipping of the hands. At Martin's and Landau's I noticed that sponges were still used, as well as the sterilised

¹ Chloroform is the anæsthetic almost invariably used; it is administered with a modification of Skinner's cap and a drop bottle.

PLATE I.



Section of Deciduoma Malignum from the Corpus Uteri, showing the sarcomatous form of tissue. Giant cells and small round cells, without any definite arrangement. In parts the degeneration of the vessels is seen, the lumen limited by the neoplastic tissue itself.

gauze, in laparotomy. At the University *Klinik* the sterilised gauze alone was used, both for mopping purposes and temporarily tamponing or staunching. Drainage is little resorted to. In Martin's operation for colpotomy the assistant who holds the peritoneal retractor under the pubes, or seizes the uterus with a tenaculum forceps, all through the operation directs through a pipette a stream of sterilised water on the parts, which clears them of blood and washes them clean for more easy manipulation. From first to last in every particular and detail, the impression that remains is one of a scrupulously secured asepsis on the part of operator, assistants, nurses, surroundings, appliances, instruments, and patient.

Turning now to the work I personally saw done in the *Klinik* of Martin, this embraced a variety of operative procedures, a reference to which will prove of interest. I have already referred to several points bearing on his methods. His private hospital includes, besides the usual *Polyklinik* room, a lecture room for students, in connection with which latter it is interesting to observe that the steps of twenty important operations are demonstrated to the students by him on the phantom. Besides these there are the various laboratories, bacteriological and pathological, the two last being under the special direction of Doctors Orthmann and Kiefer. It goes for the saying what a large field of research the material in this *Klinik* furnishes, which attracts to it students and visitors from different parts of the world. Here, immediate examination and report are made of any doubtful tissues investigated during operation, and subsequently. Here I saw mounted some typical specimens of deciduoma malignum, one of which, owing to the kindness of Dr. Kiefer, I am enabled to show.¹ Also, an interesting section exhibiting the lumen of a uterine vein completely blocked with *bacterium coli*. In this isolated portion of the hospital is a room for the

¹ Plate I.

reception of patients who are received in emergency, mostly cases of abortion.

It would be impossible to refer to more than a very limited number of the many interesting cases I saw operated upon during my visit. Professor Martin's practice affords a daily variety, and there is always at twelve o'clock punctually ample material to repay the visitor to the operating theatre. During each operation a stenographer, to Professor Martin's dictation, writes down the conditions found, and every step taken from first to last. This report is transferred to the block in the hospital register, and furnishes, with the temperature and clinical facts of the case, a permanent record, which is rendered in some instances still more complete by the associated pathological and microscopical specimens attached thereto. The following table will show at a glance, in a certain number of selected cases, the conditions present and the operations performed, at all of which I was present.

<i>Affection.¹</i>	<i>Operation.</i>
(1) Endometritis. Chronic pelvic peritonitis. Stenosis of the external orifice.	Curettage. Colpotomy. Vagino-fixation. Division of cervix.
(2) Retroflexion, with fixation, of the uterus. Perimetritis, posterior.	Curettage. Colpotomy. Vagino-fixation.
(3) Cervical carcinoma.	Extirpation of the uterus and adnexa <i>per vaginam</i> .
(4) Cervical metritis. Erosion. Retroflexion of the uterus with fixation.	Curettage. Amputation of the cervix. Colpotomy. Vagino-fixation.
(5) Endometritis. Left tubo-ovarian tumour. Right pyo-salpinx.	Curettage. Colpotomy. Double salpingo-oöphorectomy.

¹ The verification of the diagnosis in all doubtful cases is arrived at under chloroform. The universality of this precaution in the *Kliniks* is worthy of note. It is a safeguard too commonly neglected in this country.

<i>Affection.</i>	<i>Operation.</i>
(6) Cystic myxomata of the right ovary. Left tubo-ovarian tumour. Degenerative myxomata involving the vermiform appendix.	Cœliotomy. Double salpingo-oöphorectomy. Resection of the vermiform appendix.
(7) Anterior and posterior vaginal prolapse.	Colporrhaphy, anterior and posterior. Perineorrhaphy.
(8) Retroflexion and fixation of the uterus. Descent of the vagina. Chronic pelvic peritonitis.	Curettage. Amputation. Colpotomy. Colporrhaphy. Perineorrhaphy.
(9) Carcinoma of the uterus. Abscess of the left ovary. (Proved to be deciduoma malignum).	Hysterectomy and salpingo-oöphorectomy <i>per vaginam</i> .
(10) Total uterine prolapse.	Colpotomy. Vagino-fixation. Anterior and posterior colporrhaphy and perineorrhaphy.
(11) Suppurative tubo-ovaritis, right and left.	Curettage. Hysterectomy and salpingo-oöphorectomy <i>per vaginam</i> .
(12) Retroflexion and fixation of the uterus. Descent of the vagina.	Curettage. Colpotomy. Vagino-fixation. Posterior colporrhaphy.
(13) Endometritis. Left cystic ovaritis.	Curettage. Colpotomy. Left salpingo-oöphorectomy.
(14) Left cystic ovaritis. Right chronic oöphoritis and salpingitis.	Curettage. Colpotomy. Left salpingo-oöphorectomy. Resection of portion of right ovary.
(15) Double tubo-ovarian tumour.	Cœliotomy. Double salpingo-oöphorectomy.
(16) Tubal fœtation, left tube; pyo-salpinx right.	Colpotomy. Double salpingo-oöphorectomy. Vagino-fixation.

Operation of Colpotomy and Vagino-Fixation.

The steps of the operation of anterior colpotomy, of which Martin has now performed some 390 cases, with a mortality of 4 cases, are as follows :—The genitals having been shaved, and the thorough disinfection of the vagina secured, the woman is brought well to the edge of the table, a capable assistant at either side holding the thighs apart. The operator sits in front, the uterus is drawn down,

and its length and position are ascertained by the sound. The cavity is next curetted, and any *débris* laid aside for examination. It is now washed out with a pipette, and a little perchloride of iron solution is injected. Orthmann's combination of uterine sound with claw forceps is now taken, and the sound extremity having been passed into the uterus, the neck is seized, and the uterus is drawn well downwards, so as to place it and the interior *cul-de-sac* well on the stretch. One of the assistants seizes the vaginal retractor below the urethra, drawing it well up out of the way, at the same time that, *with the same*



FIG. 2.—MARTIN'S DOUBLE CURETTE.

hand, he directs the stream of aseptic fluid from an irrigating pipette over the parts, and this continues to play through the entire operation. The operator, thus fixing and stretching the uterus with one hand, carries an incision directly in the middle line through the mucous membrane. (If it be desired to do anterior colporrhaphy at the same

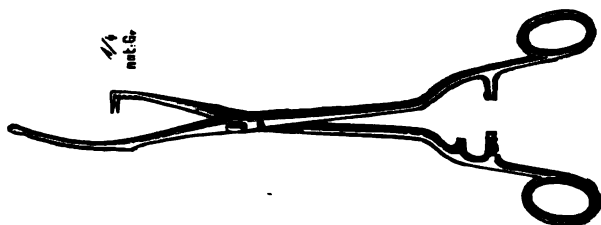


FIG. 3.—ORTHMANN'S COMBINATION OF SOUND AND CLAW FORCEPS.

time, the incision is carried elliptically at either side, so as to remove an oval portion of the mucous membrane.) This is then reflected up with a few strokes of a knife, and the sub-mucous tissue is cautiously divided, the greater part of the remainder of this step of the operation being effected with finger, scissors, or knife handle, or cautious

dissection with scalpel. The retractor is carefully used to protect the bladder and keep it out of harm's way. When the peritoneum is reached and divided with scissors, the retractor is slipped underneath, the uterus is seized higher up, and gradually overturned and brought into the vagina. Then the ovary and tube at either side are sought for, seized, brought into view, and examined. If healthy, they are returned, or the ovary, if follicular, may first be stabbed in several places with the point of a knife ;

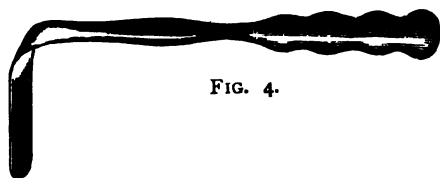


FIG. 4.

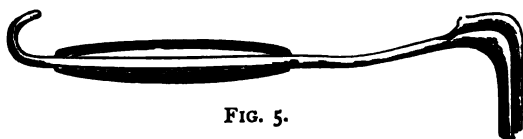


FIG. 5.

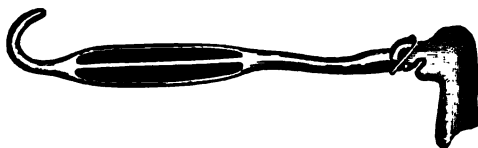


FIG. 6.

SOME RETRACTORS USED BY MARTIN IN COLPOTOMY.

otherwise the affected adnexa are resected or removed *in toto*. The uterus having been returned, the gut sutures are carried through the lips of the vaginal incision, and made to include the uterine wall in continuous fashion. The peritoneum is closed, and likewise the vaginal opening, also with continuous sutures. Of course, if simple colpotomy alone be performed, the uterus and appendages are returned, and only sufficient interference is resorted to as the occasion demands. The operation in the majority of cases where the

womb is not fixed by adhesions, or the adnexa considerably diseased, can be rapidly performed, the great point being that the bladder should be drawn well up out of reach, and carefully guarded by the retractor. Amputation of the neck of the uterus can be combined with this procedure, the posterior lip being first removed, and the flap sutured with gut, the anterior being left until the vagina has been closed, when it is also removed, and the flap similarly sutured with gut. I have seen Professor Martin, on the same patient and at the same time, perform colpotomy, salpingo-oöphorectomy, vagino-fixation, amputation of the cervix, anterior lateral and posterior colporrhaphy.

Vaginal Hysterectomy.

In performing vaginal hysterectomy, after the spaces of Douglas have been opened and the uterus has been freed, Professor Martin works altogether with his needleholder and needles of various curves and sizes, ligaturing and cutting with scissors from first to last. I have seen him thus operating upon some most difficult cases of large uterus, with involvement of the adnexa, for carcinoma, also performing pan-hysterectomy for chronic pelvic suppurations; and, in another case, total extirpation for deciduoma malignum. By colpotomy I have seen him remove a tubal foetation of the left side, as also some adnexal enlargements due to pyosalpinx, performing at the same time vagino-fixation. An interesting case now recorded by him was in his *Klinik* when I arrived. Here a colpotomy was performed for a suspected tubal foetation of the right side. This, however, proved to be an ovarian cystoma, which was removed. The wall of the cystoma contained the corpus luteum. At the left side was discovered the ectopic tubal gestation, situated in the central tubal part. The tubal wall was incised, the extra-uterine tubal ovum removed, the lips of the tubal wound closed, as the abdominal and the uterine ostia and part of the tube were healthy. The patient made an excellent recovery. There was also an interesting case of

cystoma of the right ovary, and myxomatous tumour of the left adnexa, operated upon by cœliotomy, in which the vermiform appendix was found adherent and involved in the myxomatous degeneration. The appendix was detached and resected, after removal of the tumours; and, in another case of cœliotomy, large and adherent tubo-ovarian tumours were extirpated. The abdominal incisions in laparotomy would appear to English eyes to be made in the first instance unnecessarily bold and extensive. The abdominal wound is closed by three layers of sutures. The first interrupted suture, of strong silk, is carried through the entire structure of the abdominal wall, including the peritoneum. The latter is then closed with a continuous gut suture, the aponeuroses are now brought together by a continuous gut suture, and finally the deep interrupted sutures are tied.

Of Martin's operation of cœlio-vaginal-pan-hysterectomy, for fibroma, as practised by him and Bardenheuer, I had no opportunity of seeing an example. This is practically the delivery of the tumour through the abdominal incision, ligaturing of the broad ligaments in sections, and their division to the level of the internal os. After the opening of the posterior fornix of the vagina, the uterine vessels are ligatured at either side, followed by detachment of the bladder from the anterior surface of the uterus, beginning by incision of the anterior vaginal fornix. This is laid free for inspection by projecting the uterus with the tumour over the symphysis pubis. The ligatures are drawn down into the vagina. The peritoneal wound is closed by two sets of ligatures.

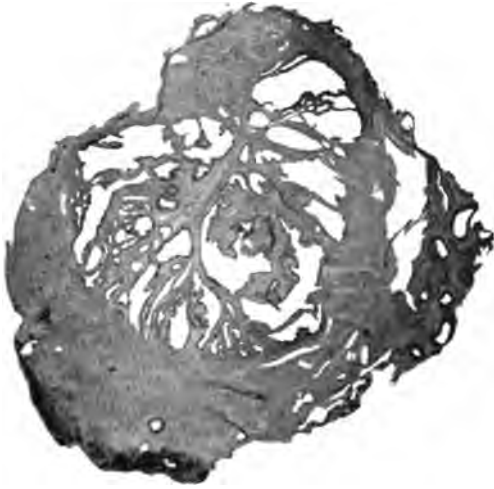
In a case of uterus fixed by carcinomatous infiltration, and incapable of extirpation through extensive adhesions, and in which there was sloughing of the fundus, Martin, having hollowed out the usual cone-shaped cavity, stuffed the latter with a perchloride of iron tampon. He objects to the chloride of zinc paste or pledgets, on account of the difficulty of limiting their action, and the danger to bowel and bladder. For some time he resorted to cautery, and other escharotics. He has returned to the perchloride of iron in

preference to any other. For my own part, I have had some excellent results with chloride of zinc, but I prefer to mop freely the interior of the cavity with one drachm to the ounce solution of chromic acid, to almost any remedy. In another case of cancer of the uterus, a most difficult one for operation, in which there were extensive adhesions and a large uterus, he performed vaginal-hystero-salpingo-oöphorectomy. Here, on drawing down the uterus, he reduced its size by taking, after Doyen's method, triangular portions successively out of the anterior wall, grasping the fundus higher and higher at each side with claw forceps, thus reducing its bulk and obtaining room to attack the appendages. The whole operation was completed by ligature and scissors. I saw this patient two or three times subsequent to the operation, and she was doing remarkably well.

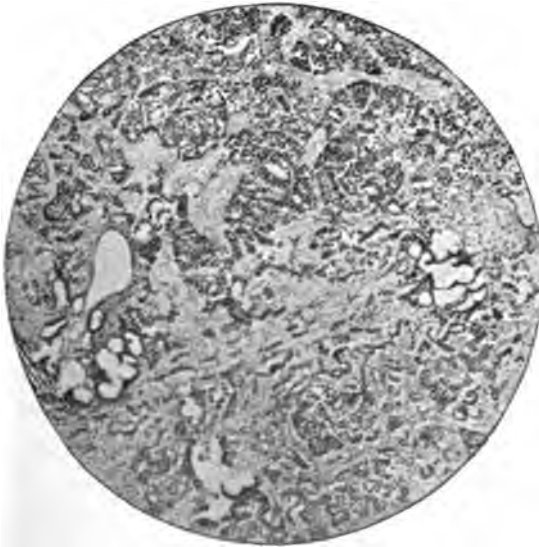
As to the results of Martin's operations, those seen by me were eminently satisfactory. There was not, on any occasion that I went through the wards, a single case of any marked elevation of temperature. There was but one death (No. 11), and that occurred in the case of a large double pyo-salpinx, in which the uterus and adherent suppurated tubes and ovaries were extirpated, with considerable difficulty from the extensive adhesions present. The patient died the same night from hæmorrhage.

Another interesting case of laparotomy which I have not included amongst the strictly gynæcological ones, and which I was privileged to see Professor Martin operate upon at night, was that of a lady who had had coeliotomy and extirpation of the myomatous uterus performed by him some five years since. She had suffered for eight days from symptoms of ileus. Professor Martin operated on her the same night she arrived from the seaside in Berlin. Extensive adhesions were found, with peritonitis and general injection of the entire bowel, which had mortified in one part, and ruptured. The intestine was freed, adhesions were divided and ligatured, the lesion in the intestine was resected and sutured, but the patient only survived nine hours.

PLATE II.



Section of Fallopian tube removed for pyosalpinx in my presence, and mounted and stained within twelve minutes by Ludwig Pick's method.



Endothelioma of the Ovary (Ludwig Pick).

Not the least interesting part of my time in Berlin was spent in the *Klinik* of Professor L., and Dr. T., Landau. This is certainly a beautifully constructed private hospital. As in the case of Martin's Institution, it is entirely the result of individual enterprise. Here, again, the same methodical record of cases, from the first entry of the patient's application to the final result, may be followed accurately, as in the museum is retained both the pathological and microscopical evidence of the disease, associated with the history of the case while under treatment, and the exact nature of the operation which has been performed. At this *Klinik* I was fortunate to meet with Dr. Eastman, a most courteous American surgeon who was of great use to me, in following the details of the cases, and in keeping me constantly informed as to any operation likely to take place. I am also indebted to him for the particulars which I am here enabled to give of the most important of the cases I saw operated upon. Here I had the advantage of meeting Dr. Ludwig Pick, who has charge of the Pathological Laboratory, and who preserves the valuable clinical, pathological and histological records I have referred to. The rapidity with which he examines a recent portion of uterus or the adnexa, presenting it ready mounted and stained, is striking. I saw myself this section of a Fallopian tube just extirpated, presented, stained with carmine, and under the microscope in about twelve minutes subsequent to its removal.¹ He uses a Jung's Hobel microtome (Heidelberg) to be had in Berlin of Leitz, Dorotheen Strasse, and of Zein, Louissen Strasse, 29. To mount and stain a specimen during operation in the time I have specified, the following is briefly the method pursued :—

The frozen sections having been made, they are transferred by the point of the finger to the 4 per cent. aqueous formalin solution, in which they are permitted to remain from three to four minutes. They are then quickly transferred on the point of a glass rod to a solution of

¹ Plate II.

4 per cent. of carmine and 5 per cent. of alum. They are then placed in water for a few seconds to get rid of superfluous carmine, next for ten seconds in 80 per cent. of alcohol, then they are laid in absolute alcohol for a few seconds, and finally placed in carbolised zylol (one part of carbolic acid to three of zylol). They are finally mounted in Canada balsam. I saw in this laboratory some beautiful sections of deciduoma malignum, endothelioma (see fig. 2, plate ii.) and malignant adenoma of the cervix.

"Mary Dixon Jones has written largely on the subject of endothelioma of the ovary. She has drawn attention to the transitional stages 'through which the anatomical elements of the ovary are more or less transformed into an embryonal medullary tissue. From this newly formed tissue are developed the endothelia—long branching protoplasmic bodies filled with living matter in the shape of coarse granules and hæmatoblasts. These protoplasmic masses have a striking resemblance to net-celled sarcoma, and, like it, they have the power of changing into their own any and every tissue of the ovary. The endothelia are seen to be gradually transformed into blood-corpuscles and blood-vessels, and thus is formed between unchanged endothelia a collection of blood and blood-vessels. The growth under consideration is, then, a profuse new formation of red blood-corpuscles and blood-vessels, mainly of capillary or venous nature, and at last terminates in what we know to be hæmatoma of the ovary. The ovary thus, in the full development of the disease, becomes a blood-cyst, and is usually found adherent to the adjacent organs in consequence of repeated attacks of peritonitis. As the hæmatoma grows and increases in bulk, a gradual thinning of the sac or capsule of the ovary takes place, with the danger of rupture.'

"The clinical features of the disease, according to her, are characteristic—pain in the region of the ovaries, severe, sharp, and lancinating; a pale, cachectic look, and marked emaciation, the more remarkable as many of the patients are *embonpoint* when the disease attacks them. There is occasionally accompanying salpingitis. Sections of the growth have the appearance of net-celled or alveolar sarcoma. It is characterised by a rapidly growing formation, and the presence of masses of granules. In short, it is a malignant neoplasm. The extreme severity of the symptoms demands early oöphorectomy."¹

¹ Macnaughton-Jones' *Diseases of Women*, 7th edition, p. 664.

Dr. Pick delivers special courses of lectures on histology, and certainly no richer gynæcological material can be found anywhere than that which here daily finds its way under the blade of the microtome. Visitors will find this ardent and enthusiastic pathologist courtesy itself.

The main interest, however, centering round the present work in Professor Landau's *Klinik*, is connected with his special operation for pan-hysterectomy by means of clamps and *morcellement*. It is a vaginal radical operation, and includes extirpation of the uterus, together with the appendages. It is employed for bilateral disease of the adnexa, and suppurative pelvic disease, involving either tubes or ovaries, as well as carcinoma and adenoma of the cervix and corpus uteri, also in fibromata of medium size and endothelioma. The method was originated by Péan, but has been modified and developed by Landau. In carcinomatous and malignant conditions, its advocates state that by this plan we are enabled to get further away from the diseased uterus than by the ligature. They assert also that the operation in all infective cases is more radical than that by ligature and suture. It will be remembered, that at the Geneva Congress this year, in the discussion on the treatment of pelvic suppurations, the concensus of opinion was in favour of the views expressed by Bouilly, Sânger, and Howard Kelly, that in the main colpo-hystero-salpingo-oöphorectomy was *the* plan to adopt in the majority of cases of serious and extensive suppurative disease of the adnexa. In this opinion Landau completely concurs, and it is in such cases that he regards his operation as the most effective method of procedure. In it drainage is secured by the vagina, no ligatures or sutures are employed from first to last, hæmorrhage during operation is arrested by traction on the uterus, and consequent torsion and stretching of the uterine vessels. Should the uterus have to be cut and divided, clamps, temporary and permanent, secure the broad ligament and the vessels, and gauze is used for drainage and for shutting off the pelvic from the vaginal cavity.

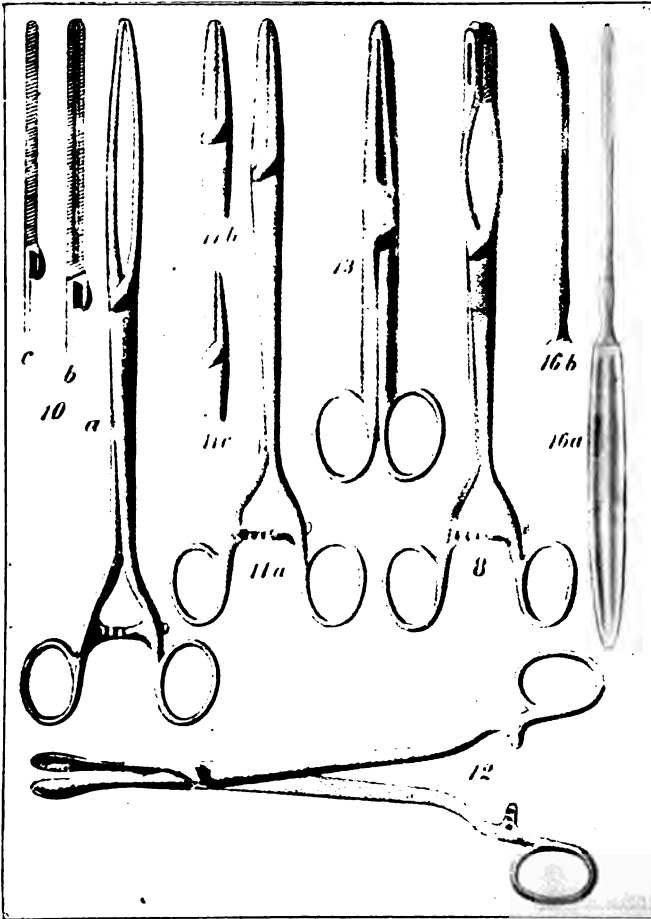
Peritoneal adhesions and new membrane form around and over the gauze, closing off the affected tissues from the peritoneal cavity. The plates 3, 4, 5, for which I am indebted to Prof. Landau, show the instruments that are required.

Space only enables me to give here the briefest sketch of the steps of the operation¹ :—

Thorough asepsis is first secured in the usual manner. The woman is in the dorsal position, and the uterus, having been exposed with suitable retractors, is seized with strong claw forceps at either side. A circular incision, made with scissors, is carried round the neck, a little higher posteriorly than anteriorly. The bladder having been carefully separated by scissors and finger, and the ureters kept out of danger, the peritoneum is cautiously opened in front, and is protected by a straight *écarteur*. The bladder and the ureters being thus lifted out of the field of operation are protected from injury. The posterior incision having been deepened, and the *cul-de-sac* of Douglas opened, the uterus is next, by means of heavy claw forceps applied at either side, drawn through the anterior incision. The tubes and ovaries are now enucleated, and any abscess *débris* evacuated. The broad ligaments are then clamped at either side—either from below upwards, or from above downwards—with a pair of Doyen's strong clamp forceps, supported by a slender pair of the same, and the uterus is next resected in the usual manner. It may be necessary to apply more clamp forceps in exceptional cases, and it is well to have a large variety of these at hand. This constitutes the operation of pan-hysterectomy simple, *without*

¹ Professor Landau has published a full description of this operation, entitled "Vaginal Radical Operation" (*Technik und Geschichte*), Professors L. and T. Landau, Berlin, 1896; Verlag von August Hirschwald, Unter den Linden, 68. A translation of this work will shortly appear at the hands of Drs. Eastman and Alfred Giles (Messrs. Baillière, Tindall and Cox, London).

PLATE III.



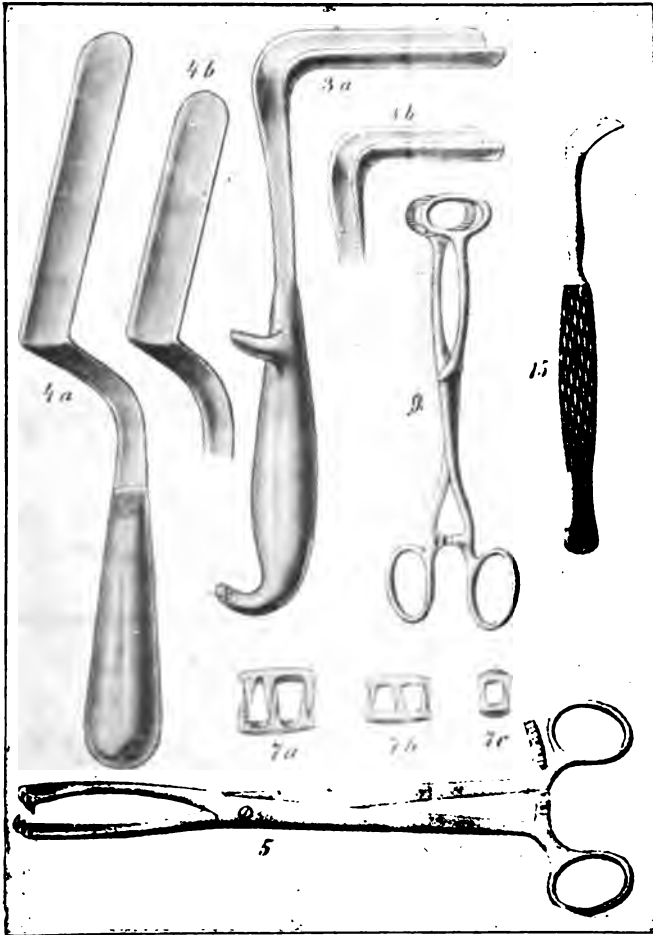
VAGINAL PAN HYSTERECTOMY APPLIANCES (LANDAU).

FIGS. 10 *a*, 10 *b*, 10 *c*, 11 *a*, 11 *b*, 11 *c*.—Broad Ligament Clamp (Doyen, Péan, Segond).

FIGS. 8-12.—Serrated Forceps for seizing the Uterus in Morcellation (Segond and Doyen).

FIGS. 16 *a*, 16 *b*.—Knife, with hollowed Blade, for Morcellment (Landau).

PLATE IV.



VAGINAL PAN-HYSTERECTOMY APPLIANCES (LANDAU).

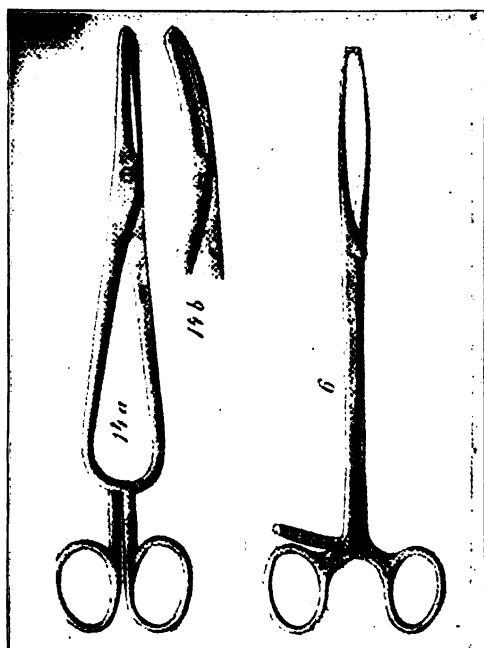
FIGS. 4 a, 4 b, 3 a, 3 b.—Vaginal Retractors.

FIG. 9.—Ovary Forceps (Doyen).

FIG. 15.—Sickle-shaped Knife, with Raspatory handle (Breuncke).

FIGS. 5, 7 a, 7 b, 7 c.—Claw Forceps.

PLATE V.



VAGINAL PAN-HYSTERECTOMY APPLIANCES (LANDAU).

FIGS. 14 *a*, 14 *b*.—Long Scissors (straight and curved) for dividing the Uterus in Hysterectomy (Landau).
FIG. 6.—Slender-toothed Clamp Forceps (Doyen).

any section of the uterus, or morcellation of it. In some cases where the uterus is large, or is fixed by adhesions and old inflammatory effects, Professor Landau divides the uterus with scissors, and carries the section from the anterior down the posterior wall, thus gaining greater power over either half of the fundus, the hæmorrhage being restrained by the application of claw forceps. The vagina is next dressed with three strips of sterilised gauze carried on into the cavity slightly beyond the ends of the clamps. These are not removed for forty-eight hours.

In other cases Landau practises complete *morcellement* of the affected uterus. The first step in this operation (after the preliminary freeing of the bladder, &c.) is the section of the uterus. The strong traction of the uterine segments exerted by the claw forceps restrains hæmorrhage. The broad ligaments are readily secured. The uterus may have to be brought away piece by piece with Landau's curved knife or special scissors. This latter morcellation is necessary in some cases of malignant disease, uterine fibroids, and extensive adhesions. Thus, in Landau's operation, no ligatures are used from first to last. His results are excellent. Dr. Eastmann has furnished me with these facts. Of vaginal hysterectomies there have been altogether 438 cases. Of the *radical vaginal operation* (vaginal extirpation of uterus and adnexæ) 191 cases. Mortality 5 cases—2½ per cent.—for complicated pelvic abscesses, double pyosalpinx, double inflammatory disease of the appendages, with and without abscesses. "Many of these cases were of such a nature that a like operation from the abdomen was entirely excluded—in fact would have been impossible." Of 247 cases of vaginal hysterectomy for cancer, sarcoma, and myoma, &c., the statistics were not complete. Approximately, Professor Landau said he thought it would be 6 per cent.

The boldness, brilliancy, and dexterity with which both the brothers Landau perform this operation must be seen in order to be understood and appreciated. There is,

from first to last, very little hæmorrhage, and the uterus is removed in a comparatively very short time in contrast with the operation by suture and ligature, though for my own part my leaning is to the latter method of operation.

I am not myself to be taken as endorsing the views I have quoted with regard to these extreme radical measures in all cases of pelvic suppuration. I believe, on the contrary, that a more conservative course is safer, and is sufficiently adequate to meet the necessities of a considerable proportion of the cases of pelvic suppuration that are constantly met with. The fact that a woman recovers after a complete clearance of her entire genital organs save the vagina and the external genitals, or that it can be shown that this operation can be performed in a variety of ways in specially skilled hands with only a certain percentage of risk, does not justify the acceptance of this procedure as a general rule of treatment. Some of the successful cases I saw operated upon by Professor Martin and others at the University *Frauenklinik*, as well as many I am cognisant of in my own practice, were cases in which these radical measures might have been, with apparent good reason, adopted. However, this is not the place in which to discuss these questions. They are rather ones for debate at the meetings of our Society.

I several times went round the wards in Professor Landau's *Klinik*, and watched the course of the convalescence in those patients I saw operated upon. I took note of the most important, and at my special request Dr. Eastman courteously furnished me with the following details of these cases.

Frau B., aged 33; seven years married, sterile. Since first year of married life has had frequent hæmorrhage from uterus. Menstruation somewhat irregular, generally profuse, always painful; more or less constant pain in lower abdomen, especially in pelvic region. Painful defæcation.

Status.—Both lateral pelvic regions are excessively tender and painful. In the posterior Douglas is a firm, unyielding

immovable tumour, painful on pressure, size of an apple, continuous with uterus in front. Uterus not enlarged, slightly mobile.

Diagnosis.—Bilateral salpingitis with pelvic peritonitis and post-uterine pelvic abscess.

Operation.—Ether ; usual aseptic precautions ; vaginal radical operation. Cervix freed from bladder, pre-cervical peritoneum opened. Median section of the anterior uterine wall. Left tube and ovary first removed. Tube enlarged to thickness of thumb, and everywhere firmly adherent to ligament, ovary and uterus. Right adnexa removed from posterior Douglas. Tube greatly hypertrophied, forms a retort-like pyosalpinx. Continual escape of pus from the pelvis. Two clamps applied to each ligament. Uterus and adnexæ cut away. Gauze drain. Very slight reaction. Patient up on twentieth day.

Frau B., aged 44 ; V.-para, one abortion. Has been ailing for years. Cannot work ; can scarcely walk about. Constant and severe pain in back and lower abdomen. Marked urinary and rectal difficulty.

Examination.—Uterus small and anteфлекed. Behind and at each side is felt a stone-hard mass in which the womb is embedded and completely immobilised as by a fibroid.

Diagnosis.—Bilateral salpingitis, with diffuse inflammation of the parametrium and pelvic connective tissue.

Operation.—Ether ; usual aseptic precautions. Posterior vaginal vault opened for diagnosis ; immediate escape of a large quantity of foul-smelling pus. Both adnexæ felt to be enlarged, and bound together in a mass behind the womb and at the sides. Typical vaginal radical operation. Total extirpation of uterus, adnexæ and the pus sacs on the pelvic floor. Unusually difficult operation on account of the fibroid-like induration of para- and perimetrium ; continual escape of pus during the whole operation. Three clamps on each side. Gauze drainage. Very little shock ; patient up on eighteenth day.

Frau C., aged 43 ; I.-para, seventeen years ago. Has

suffered during the last twelve years from menstrual difficulty. Menses profuse; in the last few years almost continual inter-menstrual hæmorrhage. Conservative treatment had been of no avail. Painful and difficult micturition.

Examination. — Patient pale; high grade of anæmia. Uterus reaches to the navel. Several nodular masses of irregular size on the anterior wall and at fundus. A large mass at the right pushes the uterus towards the left side of the pelvis. Portio high up. Uterine cavity pushed to the left but not enlarged. Uterus is firmly immobilised.

Diagnosis.—Multiple fibroids—one intra-ligamentary and several sub-peritoneal.

Operation, 12.8.—Ether; usual aseptic precautions. Vaginal *morcellement* of uterus and fibroids. Cervix denuded. Bladder and ureters elevated out of danger. Typical Pean's operation—piecemeal removal without prophylactic hæmostasia. Operation long, tiresome and difficult. Very little hæmorrhage. Shock practically *nil*; no reaction. Patient up on twenty-first day.

Frau H. G., aged 55. For advanced carcinoma uteri. Cauliflower growth involving the whole of the portio and extending into the anterior vaginal wall.

Operation, 12.10. — Ether; usual aseptic preparations. Vaginal hysterectomy. Clamp operation. Anterior wall of uterus difficult to work with on account of its brittle and friable condition. Posterior Douglas opened first. Finger introduced from here. Uterus luxated posteriorly. Finger brought over the fundus, and the utero-vesical space opened with it as a guide. Vaginal wall loosened thoroughly from bladder and ligaments, and removed as widely as possible. Two clamps applied to the ligaments on each side. Uterus and adnexa then cut away. Rather free hæmorrhage during operation. Little shock. Wound healed nicely in spite of the extensive removal of vaginal wall.

Frau H., aged 57; 1.-para, thirty-four years ago. Gives a long history of pain and hæmorrhage. Menstruation

irregular for twenty years. No menopause; profuse menses, and inter-menstrual hæmorrhage. Repeated attacks of pelvic peritonitis.

Examination.—Patient fairly well nourished, but pale and anæmic-looking; decidedly weak. Uterus extended above the navel; multiple irregular nodules palpable through abdominal wall. Portio is high up and fixed behind the symphysis. Behind the enlarged uterus is a large, soft tumour, quite immobile, firmly adherent to the uterus; fills the whole lower pelvis and lying more to the right.

Diagnosis.—Multiple uterine fibromata and right ovarian cystoma; pelvic peritonitis.

Operation, 12.17.—Ether; very careful aseptic precautions. Trendelenburg position. Ventral laparotomy. Uterus pushed aside, and the man's-head-sized ovarian tumour shelled out of its bed with difficulty; internal cysts broken up with the hand. Left hydrosalpinx next liberated, which was in intimate connection with the sigmoid flexure.

The posterior *cul-de-sac* was next opened by pushing a clamp through it from above, the uterus, meanwhile, being strongly drawn up over the symphysis. The incision was enlarged laterally, and then, with the help of an assistant, a curved claw forceps was passed through from above and made to grasp the anterior cervical lip.

The fundus was now strongly anteverted again and the cervix pulled up high in the pelvis from behind and above. Then it was circularly incised and separated from the bladder, the operator working always from above, not from the vagina. After the cervix was thoroughly loosened in front and behind the right ligament was cut through from above clear to its base. Neither ligature nor clamp was previously applied, the assistant compressing the ligament with his fingers. Then the vessels were caught up and ligated. The left ligament was treated in just the same way, and the uterus removed. The ligatures were all left long and drawn down into the vagina, so that the stumps of the ligaments were intra-vaginal; the anterior and posterior

flaps of vaginal wall, together with overlying peritoneum, sutured, closing the pelvis. The abdomen was then closed with a single layer of silver wire suture.

Patient did not rally from the operation—lay exhausted and grew steadily weaker. Died on the third day with no definite symptoms. *Post-mortem* showed pelvis and abdomen to be entirely free from blood. No signs of infection of peritoneum. Visceral and parietal serosa smooth and clean. Bladder and uterus uninjured and normal. Kidneys normal. Lungs congested.

Another instructive case I saw in Professor Landau's *Klinik* was a demonstration by his assistant, Dr. Ferdinand Mainzer, with the electric cystoscope of a carcinomatous growth from the uterus invading the cavity of the bladder through its posterior wall, and thereby determining the question of operation.¹

Here is a drawing of Professor Landau's instrument for

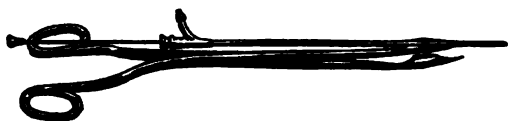


FIG. 7.

puncturing and exploring a pelvic abscess. The trocar with cannula runs in a groove on the branched dilator. The abscess having been pierced with the trocar is emptied by the cannula, and the dilator can then be pushed home and the blades separated. Curiously enough, Dr. Christopher Martin of Birmingham, showed last year an instrument devised by him quite independently of Professor Landau, almost identical in principle to this.

At the University *Frauenklinik* in Artillerie Strasse, I saw several interesting operations. Here, the hour of opera-

¹ Ueber den Werth der Cystoskopie und des Ureter-Katherismus beim Weibe, von Dr. F. Mainzer, aus Professor L. Landau's *Frauenklinik*, Berlin (Sonderabdruck aus der *Berliner Klin. Wochenschrift*, 1896, No. 49).

tion is adhered to with a punctuality akin to military precision; and as the operations begin precisely at any hour from 7.30 a.m., the visitor must be prepared for an early start if he means to be in time. However, notice of any major operation is sent out the day before to those whose



FIG. 8.—OLSHAUSEN'S RETRACTOR (see also fig. 4).

names are entered in the visitors' book. Professor Olshausen is the controlling power, and is well seconded by Professor Winter and Dr. Koblanck, and an able staff of assistants. As I have already said, the perfection of aseptic surgery is to be seen at this *Klinik*. I saw Olshausen, Winter, and Koblanck each perform vaginal hysterectomy

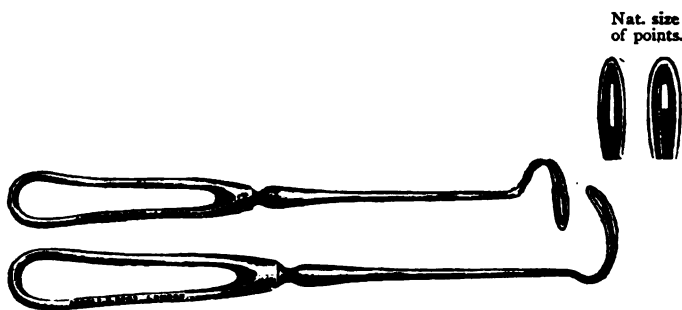


FIG. 9.—OLSHAUSEN'S NEEDLES.

for carcinoma. Professor Olshausen used a Paquelin's cautery to disinfect the uterine cavity. He has his own special retractors and needles (to be had of Windler, 3, Dorotheen Strasse, Berlin) for ligaturing the broad ligaments. The mucous membrane is divided by a circular incision, the anterior *cul-de-sac* is opened, the nail of the

thumb or forefinger, or blunt pointed scissors, being used for the careful separation of the bladder. A rolled gauze tampon is carried in front, and after the posterior *cul-de-sac* is opened, a similar protecting roll is placed posteriorly in Douglas. Portion by portion the broad ligament is divided, and the vessels are ligatured by scissors kept close to the uterine wall until the entire organ is detached at either side. When the uterus is removed, the peritoneum and vaginal wall are first united back and front, and then the entire wound is closed with continuous sutures.

In a case of colpo-hystero-salpingo-oophorectomy, practically the same plan was adopted by Koblanck, the uterine neck being first carefully stitched, and the sutures used to draw down the uterus. There was practically but little hæmorrhage during the extirpation, nor in the subsequent removal of the appendages. In another very difficult case of extirpation for carcinoma, Professor Winter used a curved cautery clamp on the broad ligament, and seared the vessels with a Paquelin's knife for a certain distance at either side, but ligatures were also resorted to for control of hæmorrhage.

Koblanck removed by laparotomy a large adherent pyosalpinx. The tumour, about the size of the closed fist, was firmly attached by adhesions to the pelvis on the right side; the Trendelenburg position was availed of, and at the left side salpingo-oophorectomy was also performed. The tumour was removed clean by needle, ligature and scissors. In another difficult case of the same nature operated upon by Olshausen, the great advantage of the Trendelenburg position, with the help of the electric light, was also illustrated. These early morning operations must necessarily be performed by aid of this light, the lamp used at the *Frauenklinik*, of which I have secured a duplicate, being admirable. The twenty-five or fifty candle burner is contained in a large cup-shaped reflector, revolving at any angle, and easily held by an assistant, or it can be placed standing on an adjoining table.

PLATE VI.



LANDARO'S OPERATION.

Commencement of the circular incision on the Anterior Surface of the Cervix, the neck being drawn out of the Vulva with claw-forceps.

PLATE VII.



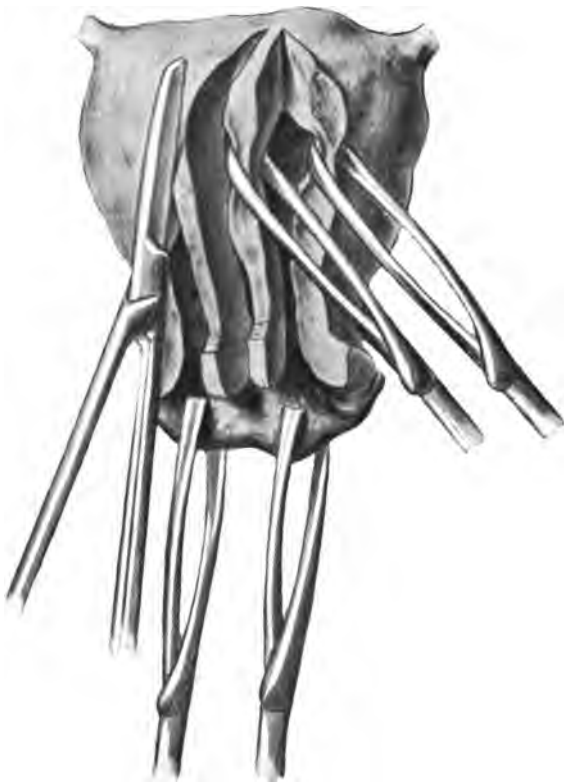
Evulsion of the Fundus from the Pelvic Cavity.

PLATE VIII.



The Anterior Wall of the Uterus having been divided, and the margins of the incision drawn forcibly apart by claw-forceps, the Posterior Wall of the Uterus is divided with scissors from above downwards; the Rectum is protected with the finger introduced therein.

PLATE IX



**Morcellation of the Anterior Wall of the Uterus by removal
of vertical strips.**

In a case of extensive recurring vegetations of the vulva, the mass was cleanly dissected off by Koblanck, leaving a large oval raw surface about $3\frac{1}{2}$ inches in length, and close on 3 inches wide, which it was impossible to cover by adjustment of the edges, so a long incision was carried from the pubes to the spinous process of the ilium. The skin was raised, and the glands and subcutaneous tissue were cleanly dissected out. The denuded surface was contracted by two layers of gut sutures, passed deeply and superficially through the tissues. The raised skin was then glided over the raw

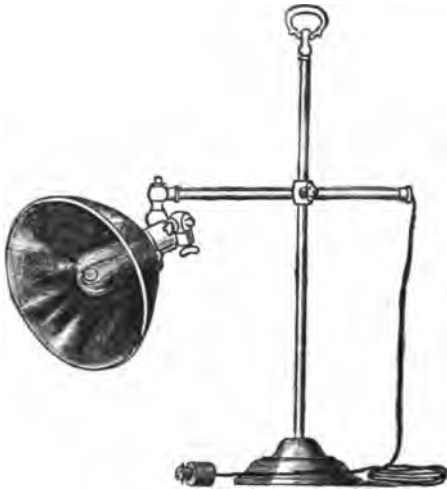


FIG. 10.—PORTABLE ELECTRIC LAMP WITH REFLECTOR.

surface fixed by sutures, and the margins of the wound in the groin brought together. A small drainage tube was inserted. I have since learned from Dr. Koblanck that all the cases I saw operated upon in this *Klinik* have done well.

I cannot close this communication without again expressing the obligation I felt myself under, in quitting Berlin, for the courtesy I had received at the hands of every gynæcologist with whom I had come in contact. Not only had I the pleasant experience of seeing the practice in the operating theatre, but the immediate results of it at the bedsides of the patients.

REVIEWS.

PRACTICAL MANUAL OF DISEASES OF WOMEN AND UTERINE THERAPEUTICS. By H. MACNAUGHTON JONES, M.D., M.Ch., M.A.O., F.R.C.S., &c. Seventh Edition. London : Baillière, Tindall & Cox.

Two years ago, when the last edition of this book appeared, the late editor of this JOURNAL in his review remarked that, "while it was actually but the sixth edition of a popular manual, it was virtually a new work."

The march of gynæcological progress has been a rapid one, the literature of the subject has grown apace, and the last two or three years have been especially prolific in pathological records and new operative procedures. Accordingly Dr. Macnaughton Jones, determined to keep his work abreast of the day, has again found it necessary not merely to bring out a new edition of his book, but largely to re-write it. No previous issue of this manual has undergone such complete revision and reconstruction as the present one, in the re-arrangement of the order in which the subject is dealt with, in the numerous additions which have been made to the text, and in the large number of illustrations it contains. The number of pages has increased from 745 to 909 ; and whilst several old illustrations have disappeared, no less than 70 new ones have been added, bringing the total up to 565.

The opening chapters, on the examination of cases in minor operations, and on menstrual disorders, are full and instructive. To these preliminary subjects he wisely devotes nearly 200 pages. Uterine displacements occupy another

100 pages. In this connection we note that while such measures as perinæorrhaphy colporrhaphy, Alexander's operation, and ventro-fixation are described at length, there is but a scanty reference to "vaginal fixation." "Uterine reflexes" are discussed in a short but suggestive chapter.

We gladly welcome the chapter on "*Deciduoma Malignum*," a disease which now for the first time makes its appearance in a British text-book of gynæcology. A clear account is given of our present knowledge of the subject, and the chapter closes with a valuable list of bibliographical references.

In the 5th edition (1890) fibroid tumours were dismissed in 24 pages. Now no less than 120 pages are allotted to this disease, 80 of which are devoted to the consideration of the various surgical procedures devised for its treatment. We have nothing but praise for the way in which the author deals with this difficult subject, and for the fair unbiassed manner in which he states the arguments for and against the various methods of treatment. In describing the extra-peritoneal treatment of the pedicle in hysterectomy we are pleased to see he adopts and figures Mr. J. W. Taylor's modification of the clamp operation. In discussing the intra-peritoneal treatment of the stump, however, he is surely in error in stating that Mr. Lawson Tait has recently advocated the application of the actual cautery to the (uterine) stump. Mr. Tait devised his cautery for the treatment of the broad ligament—and not the uterine—pedicle.

Pan-hysterectomy (or total extirpation of the uterus) is fully described and illustrated, and various methods of doing the operation indicated. Le Bec's method (included, evidently at the eleventh hour, in an appendix), and Jessett's method, differ only in minor details from that of Bardenheuer and Martin of Berlin, and hardly deserve to be described as distinct operations. On the other hand, Doyen's method of doing pan-hysterectomy is peculiarly his own, and is very properly described in a separate section. Numerous methods of doing vaginal hysterectomy—such as Schroeder's,

Récamier's, Martin's, Jessett's, Landau's and Doyen's—are detailed and figured. Here also we think that this subdivision has been carried too far, for some of these methods differ from others only in minor details. For all practical purposes we can divide vaginal hysterectomy into two categories—those in which the broad ligaments are ligatured and those in which they are clamped. Mr. Bland Sutton has revised the chapters on tubal pregnancy and ovarian cysts—subjects on which he speaks with the authority of an acknowledged master. It is needless to say both chapters are lucidly written and admirably illustrated. In the chapter on tubal pregnancy we are disappointed to find no reference made to Mr. J. W. Taylor's important observations on the encapsulation of intra-peritoneal blood-effusions in ectopic gestation.

In Chapter XXXIII. the author deals with the indications for removing the uterine appendages, and discusses with judicial fairness and absence of bias a subject which bristles with difficulties. He defends and advocates the operation in suitable, well-defined cases. He enters his protest against the term "castration" being applied to one of the most valuable of surgical procedures. On the other hand, he points out that it is an operation which ought to be performed only as a matter of surgical necessity, after the most careful consideration, and after the consequences and risks have been frankly explained to the patient. Too often, he thinks, it is undertaken for conditions which do not justify it, or which are curable by milder measures (such as those indicated in the summary of Routh's paper, "On the Conservative Treatment of Diseased Uterine Appendages").

Over fifty pages are devoted to the surgical affections of the female bladder, ureters, and kidneys. They include a good description of Kelly's method of catheterising and exploring the ureter, and of other recent advances in ureteral surgery.

Dr. Macnaughton Jones has produced a manual which is a credit to the British school of gynæcology. He has,

moreover, given the book a thoroughly cosmopolitan character, and has made it an *epitome*—up to the date of its publication—of the teaching and opinions of the greatest living gynæcologists. He has crystallised out of the immense floods of gynæcological literature all that he has judged to be of permanent value and worthy of preservation. The mass of material to be surveyed is so great, the task of selection so delicate and difficult, that it is inevitable that critics here and there will be able to point out omissions. Personally, for example, we should have liked to have seen included descriptions of vaginal cœliotomy, vaginal fixation of the uterus (Dührssen's method), and Stoltz's operation for cystocele.

The book is what it claims to be—"a practical manual for students and practitioners." Whilst it can be confidently commended as peculiarly adapted to their wants, it may be read with profit by the most advanced specialist.

The book is lavishly illustrated, and the printing and binding are all that one can desire.

C. M.

SYSTEM OF GYNÆCOLOGY. Edited by THOMAS CLIFFORD ALLBUTT, M.A., M.D., LL.D., F.R.C.P., F.R.S., F.S.A. W. J. PLAYFAIR, M.D., LL.D., F.R.C.P. Published by Messrs. Macmillan & Co.

If anything were needed to prove the great advances made of late years in the study of gynæcology, the work before us would undoubtedly establish the fact. Not many years since diseases of women were included in the different treatises of medicine; now these diseases occupy a distinct volume of nearly 1,000 pages, made up of articles written by twenty-six different authors, and the whole forms a most valuable record of the history and position of gynæcology at the present time, and the evident care with which each chapter has been prepared by the various authors, reflects great credit on all concerned.

To review this work as a whole would be doing but

scant justice to the different writers, men well-known by their position in the profession, their writings, and their practice, so we propose to give a short review of a few articles in this number of the Journal, and to continue our review on a future occasion.

Article I.—Development of Modern Gynæcology. This article is from the pen of Dr. Handfield-Jones, and leads off with quoting a passage from Sir William Priestley's address before the section of obstetrics and gynæcology, in which he traces back his experience for forty years, when the craze for inflammation and ulceration of the os and cervix uteri existed, shortly afterwards followed by a brief and not very creditable period when clitoridectomy was advocated as a remedy for numerous ills. Then came the period when displacement of the uterus held the field. Again, we had the epoch when oöphorectomy was practised largely to restrain the hæmorrhage in bleeding fibroids, and for the cure of certain forms of neurosis. Close upon this came a craze for stitching up rents in the cervix uteri, and lastly, what he describes as an epidemic of operations for the excision of the uterine appendages; there is now, however, a reaction against its too frequent performance. The article then proceeds to give a short outline of anatomical details, commencing with an account of the blood supply, passing on to the description of the pelvic peritoneum, the connective tissue of the pelvis, then turning to the pathological and clinical aspects dating back to the early part of the century when Récamier first advocated the use of the speculum and sound, which did not gain favour until about 1840, when Simpson and others took the field, and in 1845 when Dr. Bennet published the first work on inflammation of the uterus; to be followed in 1850 by a work on ovarian inflammation by Dr. Tilt. The next great era came when ovariectomy became established as a recognised operation. The author records the first operation by Dr. M'Dowell, of Kentucky, in the year 1809. In 1842, Dr. Clay, Manchester, published a group of cases, but it was left for Sir Spencer

Wells to place the operation on a scientific basis. Touching then upon the treatment of fibroids by hysterectomy and Apostoli's method of electrolysis he passes on to a short review of extra-uterine pregnancy, followed by a reference to Marion Sims' achievement in the field of vesico-vaginal fistula. Malignant diseases of the uterus, the author tells us, although known to exist early in the century, yet it is during the last fifty years that our knowledge has so vastly increased. Pelvic inflammation, researches in this direction, he says, may date from about the year 1840, and he acknowledges the work done in this direction by Bernutz and Goupil in 1862, Mathew Duncan, Dr. Gaillard Thomas and later in 1886 by Hart and Barbour, and finally in 1893 by the researches published by Dr. Cullingworth. Disorders of menstruation are traced, and finally he ends his article by a tribute to Lord Lister by acknowledging the deep debt of gratitude which gynæcology owes him, for without his scientific discoveries and brilliant teaching the successes of modern pelvic and abdominal surgery could never have been won.

Article II.—On the Anatomy of the Female Pelvic Organs, by Dr. Berry Hart. This is an excellent article and well illustrated. He treats the subject under seven different heads: (1) The main points in the anatomy of the female pelvis and of the pelvic floor filling in the outlet; (2) The anatomy of the external genitals—that is, of part of the outer aspect of the pelvic floor; (3) The anatomy of the organs and tissues in the substance of the pelvic floor—that is, of the vagina, urethra, bladder, rectum and anus, connective tissue, blood vessels, lymphatic and nerves. Each of these several parts are carefully and clearly described, and the illustrations are most complete and cannot fail to be of much interest to gynæcologists, especially those who are in the habit of performing hysterectomy for malignant disease. The plates of the lymphatic system are most instructive. (4) The anatomy of the organs in the upper aspect of the pelvic floor, that is, of the uterus, Fallopian tubes, broad ligaments

and ovaries, the pelvic peritoneum. The structure of the several organs are minutely and accurately described and the value of the description is much enhanced by the illustration ; (5) The position of organs, their dissection and structural anatomy. Under this heading the author describes minutely the dissection of the pelvis and the relative position of the different parts, then proceeds to describe the structural anatomy and the changes in pelvic floor due to position ; (6) Surgical anatomy. The reader is reminded of the importance of position in operative surgery—the position of the patient and the mobility of the uterus—and the blood supply ; (7) Development of the organs. The development of the female genital organs is too complex, the author says, to admit of full consideration here. He nevertheless gives some points of practical importance, and to impress this the more forcibly accompanies his description with excellent plates.

Article VII., by the editor, Dr. Playfair, is one which is of great interest not only to the profession, but to the public generally. He shows that the higher education of women has taken such enormous strides of late years that it is now universally recognised ; the author points out that one great fault in the management of the high schools “is that they are too often started on the absolutely untenable theories that the sexual factor is of secondary importance, and that there is little, if any, real distinction between a girl between the ages of 14 and 20 and a boy of the same age,” and he points out that while it is questionable whether in boys’ schools the attention given to exercises and athletics may not be excessive, in girls’ schools it is, on the other hand, not nearly sufficient. These are all-important points, and the author has done well to lay such stress upon them, and it is to be hoped that good fruit will be borne from it to the readers of this article and from them to the managers of girls’ schools.

The author, in respect to the treatment of some severe cases of neurasthenia still commends the “Weir Mitchell”

or "rest cure" treatment, but points out for the treatment to prove successful it is essential to exercise it in properly chosen cases only, and that it should be done thoroughly and well.

Finally, the question in relation to diseases of the nervous system in gynæcology arising in connection with insanity is shortly discussed, and reference to a paper by Brown, who contends that quite 25 per cent. of female patients in asylums in the United States suffer from some form of pelvic disease. The haphazard way in which operative interference is resorted to is, in the author's opinion, unscientific, unnecessary and often hurtful.

Article XII.—Diseases of the external genital organs, from the pen of Dr. Smyly, is of interest more, perhaps, to the general practitioner than the gynæcologist. Much of the article is taken up by notes on vulvitis; venereal diseases are touched upon. The remarks on tumour of the vulva are short, and an excellent engraving of a perineal hernia is given. Tumours of the vagina are discussed. The article is well written and practical.

Article XIII.—On Displacements of the Uterus, by Professor Simpson. In this article, after discussing the deviations from the normal level of the uterus, the degrees of descent and pathological anatomy of the different elements of the pelvic contents, the author proceeds to describe the causes of prolapse in a masterly manner. A timely word is given to the "prudent practitioner" in his midwifery practice, to keep in mind the risks to which a woman is subject who comes out of her confinement with a damaged perinæum, relaxed uterine ligaments, and subinvolution of the uterus. In considering the treatment of these, massage, as recommended by Thure Brandt, is described, and the treatment by pessaries discussed. In the choice of pessaries the author points out that care and judgment of the proper form is required of the scientific worker. In retroversion, the fixation of the uterus, either by ventro-fixation, shortening the round ligaments,

or fixing the cervix uteri to the back wall of the vagina, and in cases in which adhesions are acquired that cannot be relaxed by bi-manual manipulation, the operations of Alexander and ventro-fixation are justifiable. Colpotomy, which allows of the fundus of the uterus being reached through the anterior fornix is mentioned, and the operation of opening the peritoneum by the sacral method alluded to. We are disappointed, however, that the operative procedures connected with these different methods are not in any way described—not even Alexander's operation for shortening the round ligaments, and from which so many cases are claimed to have been relieved, if not cured.

Article XVI.—Pelvic Inflammation. Dr. Cullingworth in this article retains the old classification; the article, however, appears to be based very largely on the author's personal experience. The author divides the subject into two parts which he prefers to designate pelvic cellulitis (synonyms, para-metritis, peri-uterine phlegmon), and pelvic peritonitis (synonyms, perimetritis, perisalpingitis, periöophoritis). In discussing pelvic cellulitis he first carefully defines his meaning of the term; then describes the anatomy, etiology and pathological anatomy. The description of the symptoms and physical signs are most clearly given. The process of formation of pelvic abscess subsequent to cellulitis is graphically detailed. These abscesses, according to the author's experience, would appear when they leave the pelvis to follow the track of the blood vessels, and other parts such as the ureters, which are accompanied by a proliferation of the connective tissue, and not by the nerves and tendons. The statement that these abscesses frequently burst into the rectum, the vagina and bladder, appears to rest on very slender foundation. The diagnosis is well worked out and very clear. In discussing treatment the author issues a warning note against the too free use of opium and antipyretics.

The symptoms of pelvic peritonitis are very minutely

described. The treatment is divided under three heads, viz., Preventive, Medical and Surgical. Under the latter head the author discusses the question of removing the appendages; also the operation proposed and carried out by Pean, and since popularised by Segond and others, of the removal of the uterus through the vagina, supplemented if necessary by the removal of the appendages. The operation is carefully described. Finally a certain number of cases in which formidable adhesions exist between the uterus and bladder are referred to which can be treated by Dührssen's operation, while the separation of adhesions in the pelvis can occasionally be effected without operation by the manipulative method associated with the names of B. S. Schultze and Thure Brandt.

Article XVII.—Pelvic Hæmatocele. Sir William Priestley opens this subject by some introductory remarks on the general pathology, and then divides the subject into two parts: (1) Intra-peritoneal hæmatocele; (2) Extra-peritoneal hæmatocele. The author traces the history of research into the pathology since the days of Recamier's "*tumeur sanguine du Bassin*" is well summarised. The author, in discussing the sources of hæmorrhage, whilst recognising that the most frequent cause is due to various forms of *extra-uterine gestation*, does not by any means accept the dictum of Lawson Tait, Fritzel and others, that pelvic hæmatocele is nearly always due to this cause. The theory is quite opposed to his own experience, and he goes on to show that rupture of a vessel in some of the structures of the ovary—quite distinct from hæmorrhage in connection with large ovarian tumours—is a cause of pelvic hæmatocele; again, the mucous membrane of the Fallopian tubes, which contributes to the menstrual flux, would seem to occasionally be capable of pouring out so large a quantity of blood as to produce a hæmatocele. It is believed also that if blood has been retained in the uterine cavity by occlusion of the os, or by displacement, it may be driven by uterine contraction along the oviducts into the peritoneal cavity, or burst the

tube, and so form an hæmatocele. The whole of this interesting subject is dealt with at length by the author, and the views of different authorities are ably reviewed, the symptoms and progress of an hæmatocele described, and most valuable information imparted. Sir William's experience would seem to lead him to the conclusion that, as a general rule it is best to treat these cases by a palliative method, quoting the experiences of Nélaton and Voisin in support of his views, and although later Meadow advocated more frequent recourse to puncture, yet, still more recently surgeons as Thomas, Gusserow, Pozzi and others only recommend surgical interference in more serious cases, each of which is to be judged by its individual peculiarities.

F. B. J.

FUNCTIONAL DISORDERS OF THE NERVOUS SYSTEM IN WOMEN. By T. J. MCGILLICUDDY, A.M., M.D., Consulting Physician to the Italian Hospital, N.Y., Surgeon in-charge of the New York Mother's Home, Maternity Hospital, &c. Pp. 367, 45 engravings and 2 plates. London : Ballière, Tindall & Cox.

It is some years since Professor Clifford Allbut startled the medical profession in England by his Gulstonian Lectures on Visceral Neurosis. It was not so much that he put forward anything before the College of Physicians that was new or previously unknown in regard to those affections of which he spoke, as that he brought into greater prominence various visceral affections associated with local morbid conditions of the pelvic viscera, which necessarily must come within the province of the gynæcologist, as well as the general physician, to treat. Increased experience has taught this distinguished physician to modify some of the views he then, with such force and satire, put forward. That knowledge has demonstrated clearly that none of the viscera of the body are free from those irritative effects due to morbid impulses generated in

the uterus and the other organs of generation in women. The writer of this notice brought the subject fully before the Gynæcological Society of Great Britain a few years since, and then in a tabulated record of some two hundred and fifty cases, carefully collated and noted, proved how such uterine and ovarian reflexes spring from morbid states of these organs, occasionally even those of a trifling nature. In fact, very few of the conditions traced by Dr. McGillicuddy to disturbance of uterine functions, will be found to have been excluded from the cases in the paper referred to. On other occasions and elsewhere we have specially drawn attention to dental reflexes, ocular reflexes and aural reflexes, due to peripheral irritations in the branches of the fifth nerve, in the auditory, the facial, and in the optic, as well as the branches of the motor oculi. Such peripheral irritations can be clearly traced at times to gastric disorders and affections of the abdominal viscera, as well as to the more common diseases of the pelvic organs in women.

The work before us but emphasises a fact now widely recognised by all gynæcological authorities, that such reflex neuroses as the author instances in its pages, are constantly to be met with when there is any divergence from the normal physiological discharge of function in any portion of the generative tract in a woman. Not long since, at the Gynæcological Society, we gave the details and showed the appearances of a case of strange flushing of the face and head, with rapid pigmentation of the skin, attended at times by unilateral extravasation in the subcutaneous vessels due to vaso-motor disturbance in a case of dysmenorrhœa, and we hope shortly to place on record an instance of recurring menstrual esthiomenic ulceration of the nose in which, from first to last, each menstrual epoch caused a recrudescence of the disease in type exactly similar to the original attack. Recently a relation has been traced between the nasal glands and the menstrual molimen.

With these few preliminary observations, we turn to the consideration of the work before us. It is divided into

twenty-two chapters, each one touching upon certain specific neuroses of the individual organ under discussion. Thus cerebral neuroses, spinal, cardiac, pharyngeal and laryngeal, bronchial, gastric and intestinal, renal and vesical, glandular, ophthalmic, aural, lingual, articular and dermal reflex neuroses, are all touched upon. Hystero-neuroses, hysteria, hystero-epilepsy, hemicrania and migraine, each receives a share of attention, and finally, there are some seventy-nine pages of the book devoted to some common sense rules of therapeutics. There is really little new in this work to press on the attention of intelligent gynæcologists. It emphasises all through the facts we have already adverted to, of the intimate connection there is existing between uterine and ovarian irritations and possibly grave functional disturbances in all those organs we have just enumerated. Of course there is much in the book of interest to the general practitioner as well as to the specialist, and if its perusal by the former does nothing more than bring home to him the importance of a careful inquiry into the functional regularity of ovulation, and the healthy state of the generative organs, its perusal will well repay him; while to the specialist, who narrows his sphere of observation and attack to the uterus and ovaries, the suggestion he will here find to enlarge his gynæcological horoscope, will save him many an error. Nor will other specialists than the gynæcological fail to derive instruction from its pages. "Lingual tonsils," infinitesimal pharyngeal follicles, functional aphonic conditions of the vocal cords, are the sources of a rich harvest. The galvano-cautery is the sickle. But they are not uncommonly associated with gastric and uterine affections, nor is hysteria an unknown quantity in the background of their production. The laryngologist may read with benefit this paragraph :—

"This would seem to explain their extreme chronicity under long-continued local treatment of the throat. They yield promptly, however, to the treatment of the causative disorder in the digestive or reproductive organs. The side

of the throat or tonsil which is involved usually corresponds to the side of the abdominal or pelvic cavity where the disease is most intense. Less often the entire throat is affected. Many of these attacks precede the menstrual flow, and they are quite common in young girls. The symptoms usually complained of are soreness extending down the sides of the throat, and pain of an aching character in the tonsils and pillars of the fauces. Sometimes the parts appear congested, at other times there are no local signs of disease. Laryngeal neuroses frequently accompany menstrual disturbances, and stomach cough is a well-recognised pathological condition dependent upon chronic stomach disorder."

The connection between hystero-epilepsy and ovarian hyperæsthesia is drawn special attention to by Dr. McGilliguddy. We believe that in this class of case, so familiarly associated with the name of Charcot, it is not merely ovarian hyperæsthesia we have to deal with, but pathological conditions consequent upon rupture of a corpus luteum, sclerotic changes in the stroma of the ovary, follicular distensions or minute cystic conditions, and even tubercular states of the adnexa; and it is in such cases that pressure on the nerves, which in some affords relief, rather increases the force of the pain and paroxysm. We have ourselves recently drawn attention to the frequent occurrence of ocular migraine and associated violent headache which can be relieved in women by the proper correction of the refractive trouble, notably astigmatism, so frequently present in these patients. We have recorded a number of cases in which the consequences of such refractive troubles were thus alleviated, but co-existent with the ophthalmic symptoms were various disorders of the uterus and ovaries. The mere rectification of such local troubles did not relieve the eye symptoms, but it would appear that in a large proportion of patients in whom the refraction of the eye is not normal, such latent abnormality in vision is further developed and accentuated by the reflex irritation starting from the uterus. This most important factor in the pro-

duction of ocular migraine and headache is not referred to by the author, still it is a contingency that both practitioner and specialist would do well always to satisfy themselves as to the presence of, in the treatment of these conditions. In the same way disorders of the teeth, especially obscure neuralgic pains, may have, in menstrual disorders and the state of the system associated with these, their starting point, and thus periostitis, leading to hyperostosis and consequent pressure on the pulp cavity, may cause, not only dental neuralgia, but also severe headache.

We cannot say much for the concluding comments of Dr. McGillicuddy on dilatation for stenosis and flexion of the uterus. We think that in a book of this character the dealing with the subject of electro-therapeutics in a few sentences of some ten lines of a page, is somewhat worse than "sketchy," considering the all-important bearing of the subject on modern gynæcological practice. And, further, to venture to discuss the subject of stenosis and flexion of the uterus with its treatment in some eight pages, a large portion of which space is devoted to the figuring of appliances, we do not hesitate to say spoils the character of the book. Such an imperfect and obvious attempt at padding is always to be deprecated.

At the end of the work, and, indeed, throughout its pages, are several diagrammatic figures, illustrative of the foci, starting points and connecting links of various neuroses. Having pointed out some of the possible advantages that may accrue from the perusal of this work, we may hint at a not improbable danger. The reader, impressed with the idea that every pain and other functional symptom from which a woman suffers has its starting point in some reflex neuroses originating in a functional or other disorder of her generative organs, may jump to too hasty a conclusion. *There is such a thing as overlooking a serious organic and pathological condition of an organ in the indiscreet haste to ascribe symptoms to the neurotic temperament and the hysterical imagination.* True diagnosis must depend on a process

of negative exclusion, commencing in the organ or organs affected. That practitioner alone is safe who disregards all such extraneous sources of explanation as are to be found in reflex neuroses, and concentrates in the first instance his diagnostic acumen on the careful examination of the organ or organs functionally disturbed. Such a caution is specially needed in the case of nervous women who complain of a legion of symptoms, and in whom our first duty is to differentiate and isolate those upon which our diagnosis and treatment must eventually be determined and tested. At the least the perusal of this book by the practitioner must open his eyes to many sources of error, and save him from many a blunder hurtful alike to his peace of mind and his reputation.

H. MACNAUGHTON-JONES.

OBJECTS AND LIMITS OF OPERATION FOR CANCER. By W. Watson Cheyne, M.B., F.R.S., F.R.C.S. Baillière, Tindall & Cox.

This book is reprinted from the *Transactions of the Medical Society of London*, being the Lettsomian lectures for 1896. The book is divided into three lectures. Lecture 1 deals shortly with the nature and etiology of cancer, the relation of cancer to injury, irritation and inflammation, Cohnheim's theory; the parasitic and germinal views are briefly reviewed, and the lecture terminates with the author's views of the objects and limits of operation in cases of cancer of the breast. Although there is nothing new in the methods described, yet the doctrines held by the author cannot be too widely spread as it has been too much the custom, to temporise with these tumours in the breast, even when the axillary glands are involved. Mr. Watson Cheyne rightly enforces the necessity of complete removal of the entire gland, the pectoral fascia and the tissue in which the lymphatics run from the breast to the axilla, and the whole of the axillary glands. In more advanced cases he insists upon the pectoral muscle being removed; in this

all surgeons of the present day will be in accord with him. As regards the limits of operation, he excludes from operation (1) cases of cancer *en cuirasse*; (2) cases where there is a large mass in the axilla involving the nerves; (3) cases where large glands can be felt above the clavicle; and (4) all cases where secondary cancers already exist elsewhere.

In calculating the result of these operations it is gratifying to find that 57 per cent. of the cases of operation were cured, *i.e.*, were free from any recurrence three years after the operation, and this percentage tallies very much with the results of operation for cancer of the breast at the Cancer Hospital.

Lecture 2, the author discusses cancer of the mouth and throat considered under three heads: (1) cancer of the tongue; (2) cancer of larynx, tonsil, soft palate, epiglottis, &c.; (3) cancer of the pharynx. In the operation suggested for the diseases when affecting these parts the author insists upon the operation being thorough; the lymphatic glands, the sub-lingual and sub-maxillary glands must be removed if a cure is to be looked for. The greater part of this lecture is devoted to the description of twelve cases on which he had operated.

In lecture 3 is discussed the various points raised by the cases of cancer of the pharynx related in the last section, and this is undoubtedly the most interesting and instructive part of the book, as until quite recently these cases of pharyngeal cancer were looked upon as hopeless. The total results of this class of cases are arranged by the author into three groups.

Group 1.—Cases where the disease was removed from the floor of the mouth, with or without splitting the cheek, and with or without tracheotomy, where in fact there was no wound in the neck communicating with the mouth. Of this group 8.6 per cent. died, 30 per cent. received no benefit, and 52 per cent. were benefited.

Group 2.—Cases of disease in the pharynx when the internal wound communicated with a wound in neck.

Mortality 29 per cent., no benefit 54 per cent., benefit 17 per cent., while as many as 29 per cent. are unclassified.

Group 3.—Where the disease involved both pharynx and larynx, 55 per cent. died, 81 per cent. received no benefit, and 12 per cent. were benefited, while 7 per cent. are not classified.

The remarks at the end of this lecture on intestinal cancer are limited to a few words on cancer of the rectum, and are of so rudimentary a character that they might well have been left out altogether; as the author remarks, the question of intestinal cancer would present a subject sufficient for the whole three lectures.

At the end of the work tables of statistics are appended which are well worthy of study and of great interest. The book is well written, and as much of it is based on the author's own individual work is of great value, and all those who are interested in the subject will derive much profit from the clear enunciations of the principles of the objects and limits of operations for cancer, as practised by surgeons of the present day.

F. B. J.

TRAITÉ DE GYNÉCOLOGIE, CLINIQUE ET OPÉRATOIRE par
S. POZZI, Professor Agrégé à la Faculté de Médecine
de Paris, Chirurgien de l'hôpital Broca. Troisième
Edition. Avec 628 figures dans le texte. Paris:
Musson et Cie., 120, Boulevard Saint-Germain.

In the February number (1894) of the BRITISH GYNÆCOLOGICAL JOURNAL appeared a lengthy review of this excellent work. That it should have already reached a third edition, and have been translated into English, German, Russian, Italian, and Spanish in so short a time is sufficient testimony to the widespread high opinion that has been formed of it. On that occasion we said "This is unquestionably the greatest work on Surgical Gynæcology which we have had from the pen of any individual gynæcologist." To maintain such a high standard in the face of the won-

derful growth of Gynæcology and its literature is no easy task, but in the bulky volume before us we have a most praiseworthy and successful attempt to embody all that is worth recording up to date. In looking for the points of difference between this and the last edition we notice that some chapters have been altered and others added. Thus the chapter on Asepsis has been rewritten and is well worthy of careful perusal. Naturally Fibroids call for modified and extended notice, and all the new methods of operation are given. The varied claims of and indication for Abdominal and Vaginal Hysterectomy are discussed at length, including the indications for the latter operation in cases of pelvic suppuration. On these subjects, as indeed throughout the book, Prof. Pozzi, while giving the views of others, indicates his own preferences. Of such a bulky volume of nearly 1,300 pages it is only possible to speak in general terms, as the scope of the work has been already discussed. This edition is well got up, is profusely illustrated with over 600 drawings (a large increase on the former editions), and thoroughly maintains its position as a most valuable and complete book of reference.

TRANSLATION—(ABSTRACT).

“BEITRAGE ZUR ZEHRE VAR DER OVULATION, MENSTRUATION UND CONCEPTION.” Von Dr. Paul Strassmann, *Archiv. f. Gynakologie*, B. 52, H. 1, 1896.

IN this important and lengthy paper, Dr. Strassmann considers what is already known regarding the functions of the sexual organs in the female, their relation to one another and to the whole organism, and brings special experimental investigations to bear upon some of the doubtful points and problems connected with this subject.

The work is conveniently divided into sections, and some of the more weighty observations under the earlier headings are here reproduced. From these a good idea may be formed as to the value and scope of the author's work. If time and space permit, the translators may give a *résumé* of the later and concluding sections in another issue.

(1) *The menstrual wave.* — Temperature, pulse, blood pressure, heat radiation, muscle strength, lung capacity, reaction line of the knee reflexes all have their part in the wave motion. Their energy is usually increased before the beginning of the menstrual flow, it diminishes immediately before or with the beginning of the bleeding. During menstruation the blood pressure sinks lower than that which the slight loss of blood would explain. The maximum point of irritability of the nervous system as well as that of heat radiation is somewhat retarded, being reached during the course of the menstrual period. Immediately before menstruation the decomposition of the albuminoids in the organism is notably diminished. Schrader found less nitrogen excreted with the urine and fæces, though the

nourishment was arranged to cause no fluctuation in the nitrogen balance.

(The author looks upon the pre-menstrual time as a time of preparation for a possible pregnancy, and regards the storing up of energy and diminution of excretion as a kind of "warehousing of matter for the nourishment of the foetus.")

(2) *The ovary in its relation to the rest of the body.*—The cessation of ovarian activity in women as well as in the lower animals is marked in the greater number of cases by various disturbances, and following the analogy of the "cachexia strumipriva" (myxoedema), which is noticed after loss of the functions of the thyroid, some writers, not unreasonably, have used the term "cachexia ovaripriva" for the adiposity and nerve disturbances arising after loss of the ovarian function.

It may perhaps be accepted that the ovary, in addition to its function of the preparation of the ova, has like other glands and gland-like bodies an "internal secretion" (to use the term of Brown Séquard) and elaborates and delivers certain chemical products into the blood current which have a definite effect upon the organism; if so, the removal of the ovaries will not only cause sterility but also a change in the condition of the whole organism.

A first step in the experimental investigation of this question was undertaken by Curatula and Taralli, in their experiments on castrated dogs. They found that very soon (six days) after removal of the ovaries a marked detention of organic phosphorous took place. The daily excretion sank from 1·5 of phosphoric acid to ·6, notwithstanding that the nourishment remained unchanged.

(They offer this fact as an explanation of the good results following castration in osteo-malacia, a morbid process which probably has its origin in some disease of the genital organs, and consider also that the development of fat which so often occurs after castration and at the climacterium, may probably have a direct chemical relation to the lessened

oxidation of the phosphorus retained in organic form in the tissues.)

Glaevecke has studied the bodily and psychic changes which occur in women after removal of the uterine appendages. In 42 per cent. of the cases a marked increase of the body weight took place. Nearly always some deterioration of the mental faculties was noticed, in many cases this advanced to decided melancholia, and in three cases the patients became insane. Sexual desire was lessened.

The reciprocal relation of the ovary and nervous system, especially at the times of puberty, the climacteric and menstruation has been the ground-work of many investigations that can only be lightly touched upon.

The essay of Goltz (on dogs which, after division of the spinal cord, shewed undisturbed possession of the genital functions) goes to prove that the influence of the sexual glands upon the brain must take place either through the chain of the sympathetic, or by means of alterations in the blood current; perhaps in both of these ways.

There are of course centripetal fibres, which go from the ovary to the cerebral and spinal centres; and the nervous supply of the ovary has been the subject of considerable recent microscopical work (Herff, Riese, v. Gawronski and Winterhalter), but the physiological importance and bearing of this is as yet undetermined.

Electrical stimulation of the ovary notably increases the general blood pressure (from 12 to 24 mm. in dogs). This is pointed out by Röhrig. The connection with the vaso-motor system should play an important part in menstruation.

The investigations regarding the genitalia in Basedow's disease (which show that in many cases of this disease these are the subject of degeneration and atrophy) point still further to their ultimate relation with the vaso-motor system (Theilhaber Kleinwächter).

(3) *The worth of individual organs.*—The body possesses two ovaries but one may be wanting, and apparently a large portion of the other also without material alteration of the

specific functions of the female organism. Ovulation takes its regular course, the menstrual flow is not altered either in quantity or type, and pregnancy may occur with nothing to mark it as peculiar, though half or more of the ovaries be wanting. Whether the remaining part hypertrophies is doubtful. In experiments on animals Ribbert could not detect any compensatory hypertrophy in one ovary after removal of the other, but in some cases of one-sided castration the remaining testicle grew larger.

(The knowledge of the fact that a little portion of ovarian tissue can fulfil the ovarian function is the reason for leaving a portion of the ovary (during recent years) when operating in the adnexa. It explains also the unfavourable result which sometimes follows a castration intended to be complete, when ovulation, menstruation and pain persist.)

Both ovaries are in active work at the same time, but one ovary is in front of the other, at one time the right, at another time the left.

According to Frank, in mares the ovary from which the young originates, remains small and flabby, while the opposite one contains a large follicle. Frank holds that a regular change occurs in the activity of the ovaries which may be clearly seen in horses.

(4) *The place of the uterus in the organism.*—The uterus appears to be of less importance to the body than the ovary.

Glaevecke established that in fourteen women after total extirpation of the uterus, the general condition was less affected than after castration. Ovulation continued until after the climacteric, the menstrual molimina quickly lessened, while sexual desire was but little affected. In certain cases there was a melancholic tendency.

Grammatikati found that in dogs, after extirpation of the uterus, when four or five months had elapsed, the ovaries were unchanged and ripening and bursting of the follicles went on as usual.

Hegar writes similarly, that in cases of primary absence of the uterus only fugitive grains are present and those at

irregular intervals. By the presence of the ovaries the rest of the body is kept thoroughly normal and undergoes a true womanly development. Even pregnancy, involving the nourishment and development of the foetus can take place altogether outside the uterus.

(5) *The Mutual Relations of the Ovaries and Uterus.*—

(a) Developmental considerations :—The ovary is the weightier organ because it produces the germ of generation. The development of a special genital canal is not necessary for its presence.

If the ovaries be wanting or imperfectly developed, the uterus is also affected. It is either wanting, rudimentary or infantile and menstruation is absent (amenorrhœa).

The vagina and sometimes the outer genitalia may also participate in the want of development. Further defects which may be found when the ovaries are wanting are defects in the great blood-vessels (Virchow), cretinism and idiocy.

On the other hand the development of the ovaries is altogether independent of the uterus. It is possible to find thoroughly well formed ovaries when the uterus is wanting, rudimentary or otherwise defective. Ovulation takes its usual course and pains are only complained of when there is some occlusion of the genital canal with retention of the menstrual fluid.

The uterus is dependent on the function of the ovaries, not alone because these produce the germ which is developed in the uterus—like the corn-seed in the nourishing soil—but without the existence of the ovaries the whole life-expression of the uterus disappears, menstruation ceases and the inactive myometrium atrophies.

(b) Clinical and experimental considerations : There is no uterus-function in man and beast without ovulation.

In youth when the activity of the ovaries is still undeveloped, and in age when it is already lost, the uterus, both in form and “life-expression” is modified, and after removal of the ovaries, amenorrhœa and atrophy of the uterus takes place.

Castration influences the uterus in the same way as primary absence of the ovaries. Kehrer found that in young castrated animals the uterus did not develop. Weissmann and Reismann, writing on the microscopical condition of the uterus in castrated rabbits, state that the cylindrical epithelium becomes poor, the lumen narrowed, the mucous membrane atrophied, the glands shrunken, the lymph and blood-vessels decreased, and the protoplasm of the muscle cells is remarkably diminished. An exception needs to be made when pregnancy is present. For the full development of an already existing pregnancy the presence of the ovaries is not necessary. If we remove the ovaries (on account of tumours) in a pregnant woman, the pregnancy in many cases will take a natural course without disturbance (Merkel, Maintzer). It is not until after the pregnancy is finished that the uterus atrophies.

(6) *Menstruation after Removal of the Ovaries.*—The occurrence of an irregular or periodic uterine discharge after removal of the ovaries may appear to be a contradiction to the law already ascribed. But many sources of error may step in. A portion of sound ovarian tissue may be left behind, in the broad ligaments there may be particles of stroma with ripe follicles or a so-called third ovary may be present (Olshausen, Feoktistow, Engstrom).

The extirpated tumour may be taken wrongly for ovarian. In certain cases also patients do not tell the truth (Hegar), and all uterine bleedings after removal of the appendages must not be regarded as menstrual. Particularly does this apply to diseased uteri (endometritis, myoma). Uterine hæmorrhage may also arise from venous congestion, as in heart disease and cirrhosis of the liver.

Especially, however, such uterine bleedings occur after removal of the appendages for inflammatory disease when exudations occur from pseudo-tumours of the stump. It is, indeed, quite conceivable that the ovarian nerve-branches running in the broad ligaments may become irritated by the vascularisation and the adhesions formed,

and for a long time cause similar symptoms to those produced by an active ovary. Often enough, though, the whole of the follicular apparatus has not been completely removed, a small fragment has been torn off the rotten ovary during separation, and this is left clinging to the bottom of the pelvis or broad ligament.

In 100 cases Wylie found only one who still menstruated. It is characteristic that the recurrence of rut in the castrated animal was traced by a veterinary surgeon to imperfect castration (Frank).

JOHN W. TAYLOR.

FRED EDGE.

REPORTS OF SOCIETIES.

LEIPSIK OBSTETRICAL SOCIETY, MARCH 16, 1896.

ILEUS AFTER CÆLIOTOMY AND COLPO-HYSTERECTOMY :
DRY OR WET ASEPSIS. *Centralblatt f. Gynäkologie*,
No. 47, 1896

GRAEFE reported the following cases of intestinal occlusion :—

(1) A woman, who had a normal labour at 19, underwent cœliotomy in her 25th year for left tubal pregnancy. On August 12, 1895, a *second* cœliotomy was performed for ruptured right tubal pregnancy, and the intestine was found adherent to the cicatrix of the first operation, and had to be loosened. On the second night she had pain, restlessness and vomiting, and brought up two round worms. No stool or flatus up to the sixth day p.o. Irrigation of the stomach gave no relief, and on August 18, there was fæcal vomiting; the pulse deteriorated, and the restlessness constantly increased.

Again cœliotomy. The occlusion was not in the part of intestine left to some extent adherent to the old wound, but, after eventration on to damp gauze, an adhesion, which had led to impermeable distortion, was found between two coils of small intestine. When this was reduced the intestinal canal became passable, and the patient had several thin stools the following day. Up to August 24, frequent foetid diarrhoea, with great restlessness and delirium; in an unwatched instant she got out of bed. Temperature from 38.6° to 40.5°; pulse up to 140. Creasote was given subcutaneously without real effect, but cold baths (two to three

daily) had very beneficial results, and the temperature declined to normal on August 28. She had catarrhal pneumonia from September 6 to 11, but was discharged September 24.

(2) Pan-hysterectomy was performed on a woman of 60, for cervical carcinoma. No intestine came in view, and the ligaments were stitched to the vaginal wound, and drainage secured by a four-corned cloth with a narrow strip of gauze inside it; on the second day p.o., she had a spontaneous and copious stool, and the temperature and pulse were normal. Next day much flatulence; clysters ineffectual; central gauze removed. At midnight (3-4 day) severe vomiting. Abdomen moderately distended, but very tender. Four-cornered cloth removed on the fourth day. Repeated fæcal vomit. Wind was, however, passed after clysters, and for twelve hours there was no vomiting. Next day she was better, but though she had a small thin stool in the forenoon fæcal vomiting began again before evening, ceasing for a time after the stomach was washed out. On the sixth day p.o. coeliotomy. The distended intestines were carefully drawn out and packed in damp gauze cloths, and deep in the pelvis a coil of intestine—like a figure of 8 turned on its axis—slightly adherent and occluded, was soon discovered; it was set free and fæces at once descended through it. The operation was rapidly done with little chloroform. Contrary to expectation the fæcal vomiting recurred in the afternoon, the pulse became small and more frequent, and in spite of repeated clysters, no flatus was passed. For the next two days there was continued paralysis of the bowel and repeated fæcal vomiting, the patient growing worse and reported moribund in the evening. During the night there was spontaneous escape of flatus, and next morning a copious stool after a clyster, and from that time improvement and quick recovery.

The first case is another proof of the relative frequency with which a second tubal pregnancy occurs in women who have already had one in the other oviduct. It is also

interesting that the blood left in the abdomen at the second coeliotomy had not been completely absorbed six days later at the third, but covered the intestines with a tea-like investment. The ileus cannot be set down to the dry asepsis, for the few gauze cloths introduced into the abdomen were immediately soaked with blood; moreover, the operation was very quick, and there was not much manipulation of the bowels. On the doubled intestine there was a remarkable white cicatricial depression, occupying perhaps a third of its circumference. This scar may have been caused by the first coeliotomy and have favoured the apposition and adhesion of the two pieces of intestine.

The serious illness after the third coeliotomy was without any symptoms of peritonitis, and there is no reason to attribute it to infection during the operation. It may have been due to resorption from the large masses of fæces which were retained for a week in the intestine.

The hope of an ultimately favourable turn need not be abandoned, even in persistent intestinal paralysis after the removal of an occlusion, if, as in this case, nourishing and stimulating clysters are administered and injections of camphor in ether to rouse the action of the heart.

The iodoform gauze tampon may perhaps be blamed for the ileus in this case; still ileus has occurred after vaginal extirpation of the uterus, even when the peritoneum has been closed by sutures, and except in this instance Graefe has never seen bad results from iodoform gauze drainage either in vaginal or abdominal pan-hysterectomy.

As supplementing many points in Graefe's communication, SAENGER related the following case:—

Mrs. K., aged 29, had three natural labours, all followed by normal child-bed, the last a year ago, and the children are alive. She aborted for the second time (in the 2-3 month) on December 12, 1895, and fourteen days later fell ill with severe hypogastric pains, &c. She did not consult a doctor for fourteen days more, and he, after keeping her in bed seven weeks, sent her to the clinic. During the first week of

the medical treatment of this "abdominal inflammation" she had a high temperature; when admitted she had no fever, but had severe and constant hypogastric pain, and was quite incapable of work. She was found to have pyosalpinx duplex, perisalpingo-oöphoritis and pelvi-peritonitis subacuta post abortum. During bimanual examination some soft adhesions were felt to give way. On March 3, 1896, anterior colpo-coeliotomy was performed, after curetting. The uterus was drawn down by provisional sutures, one of which tore through and was united by fine silk stitches. After the separation of loose adhesions of the uterus and adnexa, in spite of every care in drawing down the uterine portion of the left tube, which was much thickened and evidently full of pus, the mesosalpinx was torn, the tube threatened to burst, and it was found impossible to draw down the abdominal end without harm. Abdominal coeliotomy was therefore performed in the Trendelenburg position after closing the vaginal wound. When a cord of omentum (thumb thick) extending over the uterus and adherent to the fundus of the bladder, was detached, an abscess appeared that had caused a depressed loss of substance in the bladder wall. The omentum, infiltrated with pus to a considerable width, was resected high up and the dimple in the bladder burnt with Paquelin's cautery. Nothing absolute about this abscess was revealed by the operation—it had probably been caused by the omentum being in contact with the tube while the latter was still open. A significant lesson taught by this case is that the laceration in the corpus uteri was still bleeding a little, and a tablespoonful of blood lay in the vesico-uterine excavation, so that if the vaginal salpingo-oöphorectomy had been carried out without the separation of the adherent omentum being noticed, perilous infection of the peritoneal cavity might have happened and not been explained even by an autopsy.

Both the tubal sacs, distended at their abdominal ends to the calibre of the small intestine, were intimately adherent to the ovaries. They were drawn out of the abdomen with-

out rupture, and, as they could not be separated from the ovaries safely, were extirpated with them, the tubes being divided with the Paquelin and cauterised right into the horns of the uterus. The abdomen was then closed. The pus in the tubes contained sparse streptococci; as cultures failed, their virulence must have been diminished.

All went well for the first few days; flatus was passed on the third. On the morning of the eighth day the temperature was 36.2° , pulse 100; in the evening, temperature 36.3° , pulse, small and weak, 136; cool skin, depressed appearance, frequent vomiting, impaired aspect; abdomen soft and not distended. On the ninth, increased collapse, frequent, but not yet fæculent vomiting. Several turpentine enemata merely brought away some rectal fæces, but no flatus; the stomach was washed out in the evening and the contents were not fæculent, and as, in spite of the marked intestinal obstruction, the abdomen was neither particularly distended nor painful, we still waited, treating the collapse by injections of camphor-ether, by 1.5 litres of saline solution, and by artificial warmth. On the morning of the tenth day (the third since the appearance of symptoms of ileus), the condition being unaltered, temperature 36.2° , pulse 130, the abdomen was re-opened under ether anæsthesia, the patient being in the horizontal position. With some difficulty from distended coils of small intestine the hand reached the pelvic organs, and found a cord of omentum adherent to the right ligature stump and to the posterior wall of the right edge of the uterus, near Douglas' pouch, between which and the uterus and the stump of the broad ligament, a coil of intestine was strangled. When loosened and drawn out, this cord was found to be the inflamed part of omentum re-sected at the first operation; the intestinal canal at once became permeable. The omentum was re-sected considerably higher up and again abandoned.

Directly after the abdomen had been closed, the patient again received 1.5 litres of saline solution and several injections of camphor in ether, and was put in a hot pack. A

spontaneous stool was passed the same evening, temperature and pulse became normal, and the woman got quite well without further intestinal trouble.

This was the first case of ileus among my cœliotomies since I adopted wet asepsis with the soda-salt solution. But the cause of the adherence of the occluding cord of omentum was evidently in the omentum itself, because the re-section had not been made through completely sound tissue, so that this case does not affect the question whether asepsis of the peritoneal cavity should be wet or dry.

The results of the surgical treatment of ileus after operation are still most unsatisfactory, although, compared with those on primary ileus when the abdomen has not been opened, one has the great advantage of knowing beforehand where to look for the occlusion when the other means of inducing peristalsis have failed. The decision as to early interference is always difficult, but must be made, if possible, before the onset of fæculent vomiting. And this decision is rendered harder because the symptoms of intoxication resulting from the occlusion often set in with startling suddenness and carry off the patient before one can properly deliberate upon active measures. The prominent symptoms of collapse and cardiac failure must, therefore, be combated by energetic analeptic treatment; large doses of camphor in ether (1 : 4) and the copious infusion of saline solution (one to three litres) are of peculiar value both before and after the operation, and relieve the thirst which is one of the most tormenting symptoms. Most important elements in success are rapid and abstemious operation, if possible without eventration or manipulation of the intestines, and care in preventing the loss of body heat.

I lately lost a case from ileus after a vaginal total extirpation of the uterus and adnexa, which I performed with clamps by Doyen's method for a large myoma of the fundus, and must attribute the exitus to the fact that the conditions just mentioned could not be properly carried out. The patient, though 55 years old and extremely anæmic and

miserable from losing blood for many years and from a recent flooding, stood the operation very well, and up to the third day the temperature did not rise above 37.9° , nor the pulse above 118, and she had a copious stool, after castor oil, on the eighth day. On the thirteenth day she had symptoms of occlusion, the temperature remaining normal, pulse slightly quickened, some distension and tenderness of the abdomen. Vomiting and retention of flatus were for several days almost the only severe symptoms, so that, unfortunately, interference was too long delayed. The abdomen was opened on the seventeenth day p.o., the fourth after the first appearance of the symptoms of ileus, and it was found that a cord passing upwards out of the small pelvis from a drawn-out appendix epiploicus, to the root of the mesentery, had constricted a coil of intestine; but in addition to this, above the gap in the peritoneum and vagina there were several twisted and constricted empty coils, the disentanglement of which was difficult and tedious. Even during the operation, although the stomach had been washed out, she had continued fæculent vomiting, and her pulse became very weak. She died two hours afterwards from increasing collapse.

This case shows that in ileus from intestinal adhesions in the neighbourhood of the opening after a clamp hysterectomy (especially after one for myoma, when the opening in vagina and peritoneum is wont to be very extensive), the conditions are most unfavourable; the separation of the adhesions is extremely difficult and hardly to be done without reopening the gap in Douglas' pouch, and they are almost certain to re-form, as in Graefe's second case. Ileus may occur, as Reichel has shown, even if the peritoneum has been closed by stitches, but the case is then much more favourable for operation.

In June, 1896, another case of ileus came under my observation a year and three months after a vaginal clamp hysterectomy in a woman of 44, who had suffered from multiple myoma of the corpus and recurring multiple

adenomatous polypi of the corpus and collum uteri, with bleeding, for many years. The right adnexa were removed; the left, which were quite shrivelled, were left. She made a perfect recovery at the time, her temperature never exceeding 37.9° . In the following summer, nine months later, she had a severe dysentery, followed, some time afterwards, by a purulent discharge from the vagina, and from that time defæcation became more and more difficult, and, when I was called in, the occlusion was complete. The diagnosis lay between exudative periproctitis about the upper part of the rectum or sigmoid flexure, with discharge of pus through a fistula into the vagina, and carcinoma of the same part of the bowel.

As the occlusion had come about gradually it was some time before her pitiable condition and the great distension of the large intestine, necessitated an operation. At first only cœliotomy by Kocher's method was performed as a rapid proceeding. But after the abdomen was opened the seat of obstruction had to be sought for in the small pelvis, and was found in the sigmoid flexure close above the vaginal vault, where for two fingers' breadth the gut was contracted and surrounded with hard knotty masses of periproctitic cicatricial exudation. During the examination a good deal of gangrenous pus with a fæculent smell was discharged *per vaginam*.

The descending colon was stitched to the abdominal wound and twenty-four hours later opened by Paquelin's cautery; the colon immediately contracted, and in course of the next few days enormous masses of fæces were discharged. In the next week flatus was passed *per anum*, then increasing quantities of fæces and, six weeks after the operation, defæcation took place entirely by the natural way. There is still a small abdominal fistula which does not trouble the woman, as gas only is discharged by it.

The interval that elapsed before the appearance of ileus after the operation in this case is remarkable. The rapid and complete restoration of the patency of the intestine after

the coeliotomy is also very striking. The inflammation that led to the intestinal stenosis might perhaps have arisen from the vagina and not from the intestine. But the case shows that either coeliotomy or colpo-hysterectomy may, even when the wound heals most successfully, leave seeds of infection for later developments of the most serious kind.

Graefe, in reply to Saenger, stated that in his second case he removed the gauze on the fourth day; in the first, dry asepsis was employed.

ZWEIFEL had tried wet asepsis in his clinic and found it unsatisfactory; he had now the best possible results with the dry method, and since the Vienna Congress, at which the subject was fully discussed, had not had any case of ileus. He had always held that blood should not be left behind in the peritoneal cavity, or adhesions would be formed.

DOEDERLEIN: Intestinal troubles are of such common occurrence after laparotomy, even when there is no infection, and so seriously affect the condition of the patient, that careful prophylactic attention and treatment should be given to the intestines and their function. I attach great importance in this respect to the proper preparation of the patient. Compulsory operations, as for extra-uterine pregnancy or Cæsarian section excepted, the rule should be to get the bowel empty by energetic, but not too forcible, purging and suitable diet for several days. An empty collapsed bowel materially facilitates a difficult intra-abdominal operation—a full distended one is always in the way. Thorough evacuation is especially beneficial when the intestine is necessarily or accidentally opened. The exit of infectious faecal matter can then be completely prevented, and the suture and healing of the intestinal wound have a better chance. Following the practice constantly observed in Zweifel's clinic, I give to every patient on the evening and morning before laparotomy, several powders of bismuth and opium in order to disinfect the empty bowel and keep it quiet.

Prophylaxis of intestinal trouble of course plays an important part during the operation. The intestine should not be brought into view at all if it can be avoided. When it is free, and not, as in pyosalpinx, adherent one coil with another, or with the pelvic organs, the Trendelenburg position is so much the best for the bowels that it is highly esteemed by nearly all operators. But if the gut is adherent to the organ to be removed, and protracted manipulation is required, I most strongly recommend that the desiccation of the serous coat should be prevented by

packing the bowels in damp warm serviettes (Tavel's solution) so as to preserve their smoothness and polish. And this not only as a precaution against the subsequent formation of adhesions, but to preserve the protective influence of the cellular layer against bacterial immigration—a point upon which I would especially insist since, even with perfectly correct asepsis and antisepsis, the normal defensive power of the body, especially of the peritoneum, is urgently needed to prevent infection after abdominal operations. (Doederlein here referred to his paper on the "Modern Technic of Laparotomy," *Deutsche med. Wchns.*, 1893, p. 495.)

Continued attention must be paid to the function of the intestines after the operation, and the dealing with it is indeed, though troublesome and difficult, often the only treatment required.

For the first twenty-four hours it is best to give nothing by the mouth; the vomiting that so often occurs will stop all the sooner. When, and only when, it has done so for some time, a cautious beginning may be made with linden tea or water. As soon as flatus is passed spontaneously—seldom before the second, third or fourth day—the ban is removed, and hardly anything serious is to be feared. On the other hand, if signs of intestinal paresis should appear on the second or third day p.o., meteorismus, eructations, retention of flatus or persistent vomiting of bilious matter, I usually administer high clysters, which I have found most beneficial. A soft œsophageal tube, well greased with castor oil, is slowly and carefully pushed far up into the rectum, and one or two litres of warm water are allowed to flow in from an irrigator. The tube is left *in situ* for some time, and at first only the injected water escapes, but soon, often not for five or ten minutes, as the result of a peristaltic wave, there comes a gush of residual water and flatus. A second and third quantity of warm water as a rule result in the discharge of more gas and afterwards fæces. I sometimes repeat this clyster after two hours and for several times, invariably administering it myself in the bed, until all troubles are permanently removed. If these injections are without effect, and if after the fourth or fifth repetition no fæces or flatus are expelled, the prognosis as to the cause of the intestinal trouble is very bad.

One of the most difficult points in case of ileus is to decide upon the proper time to re-open the abdomen—a most hazardous proceeding, upon which of course one only determines under extreme necessity, and when the patient will otherwise surely die. I believe that apart from the consideration of other circumstances—pain, vomiting, pulse, temperature, &c.—we have in this respect an important indication in the inefficacy of repeated and properly carried out high clysters.

A case I had lately was very instructive on this point. A woman, on whom I had performed a year previously a myomectomy with Zweifel's treatment of the stump, and who had recovered without any reaction, was suddenly attacked by pain and vomiting. She had been treated for two days for gastro-intestinal catarrh before I was called in on account of the violent colic and diagnosed obstruction from adhesion and torsion, and had the woman brought into my clinic. Her strength was still good, her pulse also, and she had no fever; I had therefore, nothing to fear from waiting. During the next twenty-four hours she had six high clysters with an absolutely negative result and the fluid came back perfectly clear; nevertheless she felt much easier, and the vomiting entirely ceased for several hours. But it returned, and, as another injection had no effect, I opened the abdomen and found the bowel bent at an angle and firmly adherent in two places; below the adhesions it was empty and firmly contracted, but the upper part was distended to the size of her arm—and reddened. The adhesions were separated, the contents of the intestine mechanically pushed down so as to empty the distended part as far as possible, and after twelve hours she had a spontaneous stool, and an uninterrupted recovery. The favourable course of events must not in the least be attributed to the interference being properly timed. The difficulties in cases of distortion and intestinal paresis occurring so soon after operation are rarely equal, and similar symptoms often occur after a laparotomy but disappear without further interference. On the other hand, patients recently operated on are very unfit for further operation.

ABEL remarked on the considerable number of cases which, without showing any signs of intestinal occlusion in the clinic, terminate in ileus after their discharge.

MENGE: If the endothelium of the peritoneal investment of the intestinal coils was really so ruined by dry asepsis, as has been several times asserted recently, and if this alleged lesion of the serosa specially favoured the adhesions of the intestinal coils, ileus would be met with much oftener than it is, and cases of occlusion would occasionally be seen in which the adhesions of the intestinal coils was due, not to their being deeply wounded, but simply to the ill-treatment of dry asepsis. I have never seen, never even heard of such a case. In every case of post-operative ileus in which I have examined the condition of the abdominal organs, in the clinic or pathological institute, adhesions of intestinal coils (or of cords) to the stumps, have been the cause of the distortion and occlusion of the bowel.

I believe that as regards the frequency of ileus, it is of no consequence whether the asepsis be wet or dry; the essential point is that the asepsis should be rigid. I do not think that it

is possible for operators to completely abolish the danger of ileus, but they can certainly diminish it, by appropriate treatment of the perilous stump, which should be left absolutely blood-dry and systematically covered with peritoneum. If the latter condition, which applies even to the usually small ovarian and tubal stumps, seems impossible to fulfil from insufficiency of serous membrane, the method Zweifel has practised for a long time is to be recommended, viz., stitching the stump to the anterior lateral wall of the pelvis or abdomen with thin catgut, so that the wounded surface lies against the peritoneal wall and is entirely shut off from the cavity.

In Zweifel's clinic, dry asepsis is preferred to wet, because it facilitates complete arrest of hæmorrhage, to which, as is well known, he attaches the greatest importance, and because it is more simple and therefore not only more easily mastered, but also more rigidly carried out by the entire staff.

GRAEFE, replying, considered that for a collapsed patient rapidity of operation, even if some blood were left in the peritoneum, was far better than the delay that might be caused by the removal of every drop of blood. Eventration is necessary in many cases. What Doederlein recommended in regard to the preparation of the patient was, he thought, probably the practice of most gynecologists, but does not unfortunately always prevent intestinal trouble. In cœliotomy, when stasis of secretion is to be feared, he drained through the vagina; he would be afraid that stitching the stump to the abdominal wall would cause ileus later.

ZWEIFEL explained that he does not stitch the stump to the abdominal wall, but to some suitable part of the free parietal peritoneum. To favour the discharge of free blood he advised that the patient should be raised up.

SAENGER said that in hæmorrhage into the abdomen in tubal pregnancy he always removed all the blood possible. If a couple of litres of salt solution be injected before or even during the operation one can afford the time to do this. There can be no doubt that discharged blood, rich in fibrin, does cause plastic adhesions and agglutinations; the conditions found in hæmatometra and hæmatosalpinx lateralis prove it. Zweifel only practised wet asepsis for a very short time, and his case of ileus p.o. cannot be attributed to it; the actual cause was not mentioned. In any case, even without asepsis, the dry manipulation of the peritoneum would have bad results. Fortunately every adhesion to the intestine, with itself or otherwise, does not cause ileus. As regards the importance of emptying the intestine before operation, insisted on by Doederlein, he could instance a case in which he had performed a Cæsarian section on a person where such evacuation was impossible. She had

vomited pieces of potato undigested after forty-eight hours, so that the peristalsis of the stomach must have been paralysed. The praise justly given to high clysters in retention of flatus may also be applied to Spiegelberg's enemata of turpentine—so little known and rarely adopted by the profession.

J. J. M.

OBITUARY.

ON Sunday, January 31, 1897, Sir Spencer Wells, Bart., F.R.C.S., &c., died somewhat suddenly at Cap d'Antibes, full of years and honours. The details of his career are so familiar to all the Fellows of the British Gynæcological Society, and have been so fully dealt with elsewhere, that there is no need to dwell upon them here. At the same time no section of the profession could be more fully alive to the immense influence which his individuality has had over the advance of gynæcological surgery.

His indomitable perseverance, his determination and pluck in the face of the greatest difficulties and opposition, and his subsequent triumphs, are now matters of history, but it is as yet difficult to duly estimate the immense benefits which he has conferred on his profession and suffering women. His achievements, like those of Lord Lister, were epoch-making, and form a striking page in the medical story of the century. Though death has removed him from our midst, his name and his work will never die; and the medical profession, all the world over, will reverence his memory.

SUMMARY OF GYNÆCOLOGY AND OBSTETRICS.

EXPERIMENTAL STUDY OF THE PATHOLOGICAL ANATOMY AND BACTERIOLOGY OF SALPINGO-OVARITIS. By EMILE REYMOND, M.D., and WM. S. MAGILL, M.D. *Annals of Surgery*, September and October, 1896. A Review-Abstract by Arthur E. Giles, M.D., B.Sc., F.R.C.S.E.

The authors had found that the bacteriological study of salpingitis by the easy and usual methods of examination led to scarcely encouraging results, because the same micro-organism was found in widely-different forms of salpingitis, and development of the microbe *in vitro* failed to furnish any explanation of the differences. They, therefore, set themselves to search for the position held by the micro-organism in the tissues of each organ, and its relation to the anatomical elements. By this means they were enabled to find streptococci in abundance, when the pus contained so limited a number as to render their discovery by direct examination impossible, and their virulence so slight that no culture in usual mediums was successful in reproducing them.

The scope of the work may be gathered from the headings of the sections into which it is divided, namely, (1) the macroscopic characters of salpingo-ovaritis, with special reference to the dispositions of the orifices of the infected salpinx, and their adhesions with neighbouring organs; (2) the microscopic lesions of each tissue, with an inquiry into the influence and order of the transformation produced; (3) the salpingitis produced by the gonococcus; (4) streptococcic salpingo-ovaritis; (5) salpingo-ovaritis due to pneumococci, staphylococci, bacterium coli communis, unusual microbes, and saprophytic microbes.

I.—THE MACROSCOPIC CHARACTERISTICS OF SALPINGO-OVARITIS.

(1) THE OSTIUM UTERI.—This may become impermeable, in the sense that no fluid can be squeezed out; and yet there may be no true stenosis—indeed, the authors believe that a true obliteration of the channel very rarely, if ever, occurs. The experiment

was frequently made of passing a very fine glass pipette through the ostium in cases of tubal cysts sectioned during operation close to the uterus, and it was always found that the pipette could be introduced, and the fluid could be drawn off through it; though all attempts to press out the fluid, before or after the introduction of the pipette, were unsuccessful. The want of permeability to the contained fluid is due to (i.) lesions of the walls, and contracted calibre of the passage, due to a transformation of sclerosis fixing the canal in a winding tract; (ii.) to external compression. This is rare; (iii.) to modifications in the direction of the canal, brought about occasionally by torsion, much more frequently by successive bends. "The real cause of retention in salpingitis is due to bends at the uterine extremity, and these are much more accentuated than is commonly believed." The mucous lining increases in length, whilst the serous cast remains unaltered in dimension; and that the former may be contained in the latter's dimension, a series of folds in the mucous coat is necessary. The tissues between the two are variously affected; those nearer the mucous coat follow its undulations, those nearer the serous coat are, as it were, lifted off from the structures just below them, and pass in a straight line over the underlying folds.

(2) THE OSTIUM ABDOMINALE.—(a) *Closing of the pavilion by adhesion of the fringes to each other.*—This in no way results from the mucous, but is due to the peritoneal covering. The fringes become first swollen and inverted; and if examined in an early stage the closed pavilion can be re-opened, the swelling fringes unfolding like leaves of mimosa. The increasing inflammation and thickening of the fringes bends them farther and farther back upon themselves into the pavilion, the peritoneal surfaces come into closer and closer apposition, and soon tend to adhere together. The increasing distension of the tube favours this process, and in a later stage the individual fringes can no longer be distinguished, being represented only by a stellate cicatrix.

(b) *Adhesions of the Pavilion and the Ovary.*—These take place in three ways:—(i.) Adhesion of the pavilion by its external surface. The mucous coat of the pavilion here remains free, but the fringes are spread over the ovary by means of their peritoneal surface in such a way that the ostium is turned away from the ovary; consequently fecundation is impossible, in spite of the existence of an unobstructed passage.

(ii.) Union of the pavilion with the ovary.—The authors suppose that just as, physiologically, the pavilion tends to approach the largest maturing ovisac, so when, instead of an ovisac, an ovarian cystic collection nears the surface of the organ, the pavilion would approach this spot, in action identical

with that produced for an ovisac ; but in this case the adhesions, then formed, persist, and in case of spontaneous opening of the collection, the tubo-ovarian cyst is constituted.

The pavilion is in some cases completely closed by the process above described, before the formation of adhesion with the ovary. The liquid collected in the salpinx is separated from that in the ovary by the coat of ovarian tissue, and also by the thickness of the fimbriæ closely applied in all points to the ovary.

In a second and less frequent class of cases, the pavilion had commenced the process of reflexion of its fringes, before the adhesion to the ovary was accomplished ; but the contact of the fringes not being complete the salpinx is not thus closed before its fixation to the ovarian wall.

(iii.) Opening of the pavilion into a cavity of the ovary.—The authors regard this as a comparatively common occurrence in the course of salpingo-ovaritis. "The ovarian cavity is most frequently transformed into a large cyst ; and a number of smaller ones are found disseminated through the walls. The largest generally opens into the salpinx, and sometimes also is connected with surrounding small cysts which open into the large one by as many regular, circular orifices. The cyst which is open into the salpinx is almost always purulent, but, on the other hand, the small isolated cysts generally contain only serous matter. This condition would tend to make it appear that the purulent cyst was infected by its communication with the salpinx. But the macroscopic character of the cyst should prevent such an erroneous interpretation, which a bacteriological examination would overthrow. For if the cyst was infected by the oviduct, it is evident that its liquid should remain clear as long as the communication between the two did not exist. In the first form which we studied, and where the two cavities were entirely independent, the cyst proximate to the pavilion was, nevertheless, purulent. The purulence of the cyst may then be considered not the result, but the cause of the communication with the salpinx."

The fluid in a tubo-ovarian cyst may be clear ; and it is probable that in such cases the cyst had once been purulent, but, by the same series of modifications as those undergone by a pyo- in its transformation to a hydrosalpinx, the contents of the cyst had become clear. Sometimes the aperture of communication between the tube and ovary becomes so large that a line of demarcation between the two organs can no longer be recognised. This depends on the time which has elapsed since its establishment. A comparatively recent communication offers a less regular and smaller orifice, like a diaphragmatic opening. Older lesions permit a larger orifice of much greater regularity

and blunt united edges. Frequently the pavilion appears to penetrate into the ovarian cavity, the fringes either floating in the liquid, or found applied to the cystic wall. It must be supposed that at the time of penetration of the ovarian wall and establishment of the communication, the fringes were in the reflected condition previously described; but the opening now existing allowed the extension of the bent-up fringes to float freely in the liquid, or to cling to the surrounding wall.

In some cases there is an intermediary cavity between the tube and ovary, due probably to a localised peritonitis with subsequent liberation of its adhesions.

Finally, such a peritoneal cyst may communicate with the tube, when the ovary is so far removed as to forbid any supposition of its formation at the expense of that organ; it may be regarded as due to a localised peritonitis situated round the pavilion of the salpinx, and set up by the out-pouring of pus from the yet open abdominal ostium.

(3) ADHESIONS WITH NEIGHBOURING ORGANS IN CASES OF SALPINGO-OVARITIS.—When the omentum is adherent, it becomes modified, being sometimes only a little stiff and red; or it may be transformed into a thick mass of dark-red colour and of considerable hardness. Numerous vascular branches run from this to the annexes. In specimens removed early in the inflammatory process the vessels are found dilated, and the meshes between the fat-globules are thickened and contain numbers of leucocytes. In later specimens, the separations of the fat-globules are more and more thronged with leucocytes, and in places the groups of fat-cells are found invaded by the inflammatory elements. Later still, the groups of the latter cells entirely replace the fat-globules, and in turn organise and furnish the cicatricial tissue. The vessels are always modified, so that interstitial hæmorrhages and thromboses occur. Adhesions with the bowel are still more complex; they are found near the omega coil for the left annexes; about the cæcum and appendix for the right; and the annexes of both sides may contract adhesions with the rectum or small intestine. The salpingitis acts as an abscess lying against the digestive tube and tending to open into it; but before this occurs, the micro-organisms of the digestive tract succeed in piercing the walls in an inverse direction, and infect, secondarily, the salpinx. Later, re-absorption of the intervening tissues occurs, and a free communication forms between the salpingitis and the intestine, "a complication frequently undetected clinically, though relatively common. Sutton insists on an amelioration produced at the moment of opening of the collection into the intestine, but this opening may frequently pass unobserved and a precise notion of its frequency is difficult."

The adhesions on the right side sometimes cause symptoms

that might lead to an erroneous diagnosis of primitive typhlitis; and in the course of operation the vermiform appendix has been removed without its recognition. Adhesions to the urinary tract are less frequent; but as a result, a salpingo-vesical fistula may occur; the flowing of pus from a salpingitis into the bladder seems insufficient, however, to provoke cystitis. Thus a salpingo-vesical fistula, in the words of Professor Guyon, was kept under clinical observation for six months, again and again examining with the aid of a cystoscope; the pus flowing from the orifice was septic, but the vesical mucus remained healthy. This may be due to the fact that urine which does not accumulate has no time to permit a culture.

(4) VARIOUS FORMS OF SALPINGITIS.—(a) *The Classical Forms.*—The authors point out that the macroscopic appearance generally does not correspond to a special histological modification of the tissues, nor to a particular form of infection; consequently the usual classification of salpingitis, although clinically useful, is, nevertheless, no more founded upon the successive stages of the affection than upon the different forms of the infection. Thus Orthmann divided the salpingitis into catarrhal, purulent, hæmatosalpinx, hydrosalpinx and pyosalpinx. Cornil modified this classification, describing successively the hydrosalpinx, vegetating catarrhal salpingitis, pyosalpinx, hæmatosalpinx, and tubercular salpingitis. Pozzi's classification recognises two forms of salpingitis, according as they form an encysted tumour or not. There are really no definite lines admitted for the different forms of salpingitis; on the contrary, under the same form are arranged widely different conditions of the salpinx. For instance, in Orthmann's classification, in the first group are found widely different forms, including endosalpingitis, where the mucous membrane is alone diseased, and follicular salpingitis, where the tissues are so deeply modified that the *culs-de-sac* of the glands, enveloped in newly-formed tissue, are found throughout the entire thickness of the salpinx. Their only common feature is, that neither contains pus; but in the first form, pus has not yet made its appearance, perhaps will never develop; whilst the absence of the pus in the second means only that it is no longer there.

(b) *Rare forms of Salpingitis.* *Salpingitis productiva vegetans* specially studied by Savinoff is the same as that called by Cornil vegetating catarrhal salpingitis; this is really a parenchymatous form, the parenchyma having assumed a preponderance in relation to the other tissues. Doran has described a *papillomatous salpingitis* in which, according to that observer, the papillomata invade the salpinx in the same manner as gonorrhœa, the contagion being due to direct contact. These papillomata determine a secretion which varies according to its situation,

being fetid and abundant in the case of the vulva and vagina; hæmorrhagic in the uterus; while in the tubes the violent infection may lead to obliteration of the pavilion; but, failing this, there flows into the peritoneal cavity a serous liquid of little irritating quality, causing, perhaps, a little ascites, but incapable of provoking adhesions; papillomata of the peritoneum and ovaries may then appear.

Follicular and nodular Salpingitis form in close dependence upon each other, and ought to be united, and considered as the exaggeration of a usual disposition of the tissue in salpingitis rather than a definite variety. The former is produced by the agglutination of certain fringes and the isolation of glandular *culs-de-sac*, forming closed cavities lying at first in the mucous but later in the muscular tissue of the organ.

Nodular salpingitis has been described as myomata of the salpinx by Simpson, Spæth, Sutton, Rokitsansky, Foersted, Meckel and Klebs. Kugelman, who found collections of fluid in these swellings, regards them as the exudation of a parametritis. Martin called attention to the relation which might exist between the indurations of the wall of the salpinx and the invagination at this spot of the mucous membrane, which was able to penetrate deeply into the muscular layer and there become isolated. He calls this form "follicular salpingitis." Schauta, basing his description on eighteen cases, insists on the muscular hypertrophy and the small cysts formed by the invagination and the strangling of the mucous membrane. To the latter he attached the most importance, considering that the origin of these tumours was inflammatory: that the inflammation started with the mucous membrane, and that the thickening of the muscular was not due to the formation of real myomata, but to a hyperplasia and hypertrophy of the muscular fibres. In his estimation the nodules developed at this part of the salpinx because its calibre was here the smallest. He thinks that this form of salpingitis has special symptoms, the most important functional sign of which is offered by the violent and paroxysmic pains. The digital examination by the vagina allows the nodular tumour to be felt in the lateral *cul-de-sac*, near the uterus.

The histological appearance of a nodular salpingitis is described. The lumen of the tube is very narrow; the myomatous tissue begins immediately outside it, the muscular fibres having lost all their normal disposition. The entire preparation shows disseminated cysts of various forms and dimensions, and covered with a cylindrical or cubical epithelium. The term *myocystic* might well be applied, but in other cases the muscular is replaced by fibrous tissue, and the tumour so ill defined that only a diffused hardness of a part of the salpinx can be

mentioned, while the disposition of the cyst remains about the same. These, however, fail to offer any constant character, and may be found scattered through the muscular or localised in the mucous coat. The walls of the salpinx offer a considerable thickness; the muscular is in spots replaced by fibrous tissue, and the vessels have thickened walls and narrow calibre. The mucous, no longer possessing any fringes, is seen as a thick layer strewn with cysts which are not found in the other tissues. The cysts are more deeply situated as their formation is more ancient. The nodular-follicular salpingitis may be explained thus:—By agglutination of the fringes, cysts are formed in the mucous of the salpinx; the walls of these cysts are very vascular, and show a strong tendency to transformation in the external coats of the mucous in contact with the muscular; it may give place to fibrous tissue, but its change into muscular tissue, invading the mucous, is often seen. Such transformation would appear analogous to that which Klebs describes for the formation of myomata; the large capillaries first surround themselves with spherical cells which ulteriorly become fusiform. The cysts included in the wall are crowded out by the formation of muscular tissue on the inside. These transformations could take place in all points of the salpinx in regular sequence, and in this case the salpingitis would deserve the name parenchymatous. But in a patient predisposed to fibromata the production of muscular fibres may be so accentuated in a single point as to form a myocystic nodulus; and as the muscular tissue tends towards a transformation into fibrous tissue, a fibrocystic formation would finally be realised in this way. To resume, the follicular salpingitis ought to be united with the nodular; and this nodulo-follicular salpingitis may be either myocystic or fibrocystic.

(To be continued.)

HYSTEROPEXY, STUDIED FROM THE OBSTETRIC POINT OF VIEW.
BY LUIGI NEGRI. *Annali di Ostetricia e Ginecologia*; Agosto. 1896.

Negri gives a table of cases from various authors of pregnancies and labours after various methods of fixation of the uterus: amongst these methods are (a) direct ventrofixation; (b) indirect ventrofixation; (c) indefinite modes of ventrofixation and pelvifixation; (d) intraperitoneal vaginal fixation; (e) transperitoneal vaginal fixation. The tables give the author, age of patient, previous pregnancies, diagnoses, operations, last menstrual period, course of pregnancy, labour, presentation and position, foetus, subsequent examination of the mother. The description of the labour is fairly full in those cases where anything special occurred.

Is conception augmented or diminished by ventrofixation? Flaischlin says that ventrofixation has cured sterility in many cases of long standing, and Veit has recommended the operation in some cases of sterility.

Dührssen says this is also the case in vaginal fixation, but Martin reports a series of 80 vaginal fixations without a single labour, thereby supporting Mackenrodt's idea that these operations produce a sharp kink in the tubes which is the cause of sterility.

The author finds in 77 ventrofixations, 25 pregnancies took place (32.46 per cent). Dührssen in 318 vaginal fixations saw 44 pregnancies (of which 17 were in 148 intraperitoneal cases, thus upsetting Strassmann's objection that the intraperitoneal vaginal fixation is a certain cause of sterility). Mackenrodt observed 12 pregnancies in 49 vaginal fixations (24.48 per cent.).

These figures absolutely prove that not only is conception possible after such operations, but that it is a very frequent occurrence. There were amongst these 6 cases of absolute sterility which ceased in 4 after ventral fixation and in 2 after vaginal fixation. In 12 cases of sterility arising from displacement of the uterus after labour, and which had existed for from two to eight years, conception took place immediately after the operation, in 4 of ventrofixation, and in 8 of vaginal fixation. It is only fair to add that August Martin has seen primary cases of sterility cured by pessaries alone. These results are not to be put down to the case of other lesions, since in these cases there were no other lesions. Hence from the number of conceptions after ventral and vaginal fixation, and from the cure of primary sterility, we may conclude that these operations not only do not impede conception, but that in certain cases they facilitate conception in women who have never conceived.

We then turn to the consideration of the behaviour of the adhesions thus created, and of the uterus thus fixed, during pregnancy, and we must before all establish the existence of such fixation at the time of conception, as otherwise we cannot speak with certainty of pregnancy in a fixed uterus. This was, in fact, the objection raised by Gottschalk in 1891, on a case of Olshausen's operated upon by Kaltenbach. This question is one with that of relapse after these operations.

Baudoin found the adhesions almost always present in 237 cases after three years, and in the few cases they were absent it was possible to attribute them to imperfect technique.

Bion found the adhesions form in 12 cases out of 14 after long intervals, and this has been proved by other authors both anatomically and by examination.

After intraperitoneal vaginal fixation Dührssen had 1 relapse in 148 cases and Mackenrodt 1 in 30. With the transperitoneal

method this was not the case, and relapse was frequent. Dührssen had 40 relapses in 207 cases, that is, a fifth of them relapsed.

How do these adhesions behave during pregnancy and labour?

Cuzzi believes in the distension of these inflammatory adhesions by the hyperæmia of the uterine tissues (Sprengelberg) and Löhlein has noticed how these distended adhesions undergo involution after labour, just as the broad and sacro-uterine ligaments do.

Sänger, to prove this distension or growth, records the cases of pregnancy after Cæsarean section in which the firm adhesions thus caused do not disturb the pregnancy.

Rivière quotes Démelin "who by accurate dissection showed how, under the influence of pregnancy, the connective tissue between the bladder and the uterus relaxes so as to allow the displacement of the bladder from the cervix uteri without any laceration," and believes that this happens with adhesions, and cites a case of tension from perimetritic adhesions which disappeared on pregnancy, also Olshausen's case, where the adhesions were not felt after labour; Sängers case, in which the first pregnancy was interrupted, but the second was not, and Fraifout's case in which the pains, so smart in the first pregnancy, were not felt in the later pregnancies.

Strassmann says that this increase is more easy in vaginal fixation of the adhesions when they are sero-serous, than when they are sero-fibrous.

According as the authors believe or do not believe in the stretching of the adhesions, so they recommend sero-fibrous or sero-serous fixation. Leopold, Larozenne and Sinclair make their adhesions as strong as possible. As regards the sutures used, there is no doubt that silk or silkworm gut is more stable than catgut. The number of sutures varies from one (Edebohls) to many (Sinclair); while (Czerny, Pozzi, Terrier) some bury the sutures, others remove them after several weeks (Leopold, Dührssen, Mackenrodt). There is evidently no doubt but that the amount of fibrous tissue included, the number of the sutures, their burial or not, the extent of surfaces applied have much to do with the ultimate stability or instability of the fixation.

Gubaroff found a cord running from the ventral scar to the uterus, which had to be divided with the scissors. Abel found the adhesions so numerous and vascular that he had to divide them between ligatures, and Poltovicz was able to do Cæsarean section extra-peritoneally, thanks to similar adhesions. These cases had been fixed by three sutures to the musculo-aponeurotic plane, and evidently little stretching of their adhesions had taken place.

Of vaginal fixations: Heller found after transperitoneal vaginal

fixation, the uterus had fallen into retroversion, fine adhesive membranes formed down at the level of the round ligaments from the anterior wall of the uterus under the floor of the vesico-uterine pouch, which was sustained by them.

Strassmann, in a case of Cæsarean section, found the uterus so tenaciously fixed to the anterior vaginal wall that when torn free some uterine muscular bundles remained attached.

Graefe says he found the same firm adhesions in a case operated upon by Mackenrodt. All these cases were examined with the naked eye after the course of a pregnancy. These adhesions, then, when present, stretch during the contraction of the uterus, there is a corresponding depression of the abdominal or vaginal scar, it is possible that at the moment they may be ruptured. Hence adhesions thus produced either are lax, and may be stretched to form those bands so much feared by Léon (exaggerating the danger of strangulation of a loop of intestine), or they are firm and then undergo a relaxation under the influence of the hyperæmia of pregnancy, or they rupture, or they make their action felt by the uterus in a way which we shall see. Both extreme relaxation and rupture of the adhesions may lead to relapse after pregnancy into deviations.

Now we come to see the influence of these adhesions on the uterus developing in pregnancy, and upon the course of labour. Ventrofixation and vaginal fixation must here be kept separate for a time. The cases of pregnancy after ventrofixation collected by Negri are 115 in 97 women. The result is known in 102 cases. There were 71 labours at term. Ten aborted, only in 8 cases attributable to the operation (Küstner and Sinclair's cases excluded). There were 4 premature births, 2 depending on extraneous causes. Five anomalous presentations were noted: 3 cases of shoulder presentation (other conditions, such as multiparity, may have contributed to this), a vertex presentation with inclined parietals, and a foot presentation. Five times there was secondary hæmorrhage, always easily controlled. There was operative interference 17 times, 3 were Cæsarean section, 7 application of forceps, 5 turning, 1 cephalic turning and 1 of extraction.

In 14 out of 115 pregnancies there were disturbances due to the operation (pains, dragging feeling at the scar, &c.).

The ventrofixation cases are divided into two big groups—the direct and indirect. The first is the suture of the fundus (Czerny, Tarnier, Leopold), or the upper part of the anterior surface of the uterus (Larozenne, Mangragalli, Sinclair), to the anterior parietal wall; the second, the cornu uteri (Sänger, Olshausen), or the peduncle of the appendages remained on one side (Köberle, Pozzi), to the anterior abdominal wall.

By the direct method 97 pregnancies, with 83 terminations

were noted ; 58 full time ones, 6 abortions due to the operations, and 2 premature births. There were 14 operative interferences, with 3 Cæsarean sections.

By the indirect method we have 10 pregnancies with 7 normal results and 1 abortion. Forceps had to be applied once.

These complications are explained as follows. We know that in the first six months of pregnancy the fundus and upper part of the uterus develop most, while in the last three months it is the lower segment which grows. The parietal wall to which the fundus is fixed develops more in its upper portion than in the lower where the adhesion is.

Leopold has also shown that the wall on which the placenta lies grows more than the others of the uterus. Thus adhesions thus fixed to the growing fundus can (1) rupture or elongate and allow the uterus free play ; or (2) resist, and then the uterine development has to take place at the expense of the unfixed portions of its surface, or if not, probably the pregnancy is interrupted.

When this compensatory distension takes place, it is probable that pains and dragging in the scar will be noted with abnormal presentations. Thinning of the posterior wall has been seen by Gottschalk and Olshausen in abortion cases. Cases of abortion in the first three months should hardly be credited to the operation, as there are so many causes of abortion which it is impossible to exclude, but in Gottschalk's case, when the adhesions were torn down by the band, the patient went to full time, although there had been two abortions after the operation. As regards labour, Sängner says that ventrofixation has a paralyzing action on the uterine muscle, causing inertia, prolongation of labour, necessitating the use of forceps and leading to secondary hæmorrhage.

After vaginal fixation there are 112 pregnancies in 99 women, 77 were followed to end. Of these 49 terminated normally and 19 aborted. Seven of these abortions were due to ordinary causes, so that only 12 can be laid to the operative procedure. There were 6 anomalous presentations all transverse. There were 9 cases of interference (3 versions, 2 forceps, 1 combined version, and 3 Cæsarean sections).

These cases are divided according as the operation was (1) extra, (2) intraperitoneal (Dührssen). By the first we get 88 pregnancies, 43 normal, 12 abortions, 2 transverse presentations, and 3 needing interference ; in 9 there were disturbances during pregnancy. By the second there are 26 with 21 pregnancies, of which 13 were followed up, 5 terminated normally and 2 aborted (one criminal, the other from a fall). There were 4 transverse presentations, and 6 needed interference (2 Cæsarean section). By vaginal fixation we get much the same complications as in

ventrofixation, but there is the possibility that the fixation being situated in the pelvis may lead to pressure on the pelvic organs. Strassmann and Graefe have seen cases of eclampsia produced thus by pressure on the ureters. Then also the fixation if firm is likely to cause a pouch anteriorly into which the presenting part impinges, and thus the force which should go to dilate the cervix is lost.

There is not any gain in favour of extraperitoneal vaginal fixation as regards pregnancy and its results, and also there is no certainty that the union will be simply a sero-serous one. Besides, relapses are common.

Comparing ventrofixation and vaginal fixation we get 69 per cent. of normal labours in the first and 64 per cent. in the second, with 7 per cent. and 15 per cent. respectively of interruption of pregnancy. Obstetric interference in 16 per cent. of ventrofixation, and 11 per cent. of vaginal fixation; but the more grave Cæsarean section was done 2·14 per cent. in the first and 3·7 per cent. in the second.

In two cases of vaginal fixation a kidney was removed owing to compression of a ureter? Disturbances during pregnancy were present in 8 per cent. of the cases after vaginal fixation and in 12 per cent. after ventrofixation. The results are unfavourable to vaginal fixation, and this is especially marked as regards Cæsarean section, for we find out of 21 cases there were 13 pregnancies with only 5 normal terminations and 3 Cæsarean sections or 15 per cent.

We see that 15 per cent. of the pregnancies after vaginal fixation and 7 per cent. of those after ventrofixation are interrupted, and to appreciate the facts we must notice how often this takes place in cases of retroflexion not treated, in those treated by pessaries, and in those treated by Almander's operation. Of 583 pregnancies in 142 women suffering from retroflexion, there were 96 interruptions, that is 16·46 per cent. But as many of the pregnancies counted amongst the normal ones took place before the origin of the retroflexion, it will be seen that the percentage of interruptions should be higher, and should approach the 22 per cent. of Bamberger or the 30 per cent. of Weberstadt.

The results of shortening the round ligaments on pregnancy are given by Strassmann as being 4 per cent. of interruption. Pessary treatment gives 12 per cent. of interruptions or 19 abortions in 107 pregnancies.

Summing up we get 20 per cent. (some say 30 per cent.) of interruptions of pregnancy with untreated retroflexions, 12 per cent. with pessary treatment, 15 per cent. after vaginal fixation, 7 per cent. after ventrofixation, 4 per cent. after shortening of the round ligaments. Other complications are less frequent after the shortening of the round ligaments. This is, therefore, the

ideal operation, in women capable of pregnancy, leaving the uterus in its normal position and free to enlarge. But it often requires hysteropexy later on and it postulates the absence of uterine adhesions, while in fixed deviations the ventral is necessitated.

Sänger says that the deviation may be corrected durably in 20 per cent. by means of pessaries, and a complete cure obtained in this way in 11 per cent. of retroflexions (Mundé, Löhlem, Sänger).

As regards improvement of method, Sinclair, Laroyenne and Mangragalli have sutured the middle section of the anterior uterine wall, which section expands best of all during pregnancy, and have left the fundus free. Of 7 cases with 11 pregnancies only 1 was interrupted, and this was during a severe attack of influenza in a patient who had already had one normal birth since her operation.

(It is necessary, as Léon points out, to guard against the tendency of the volsella holding the fundus, to drag this forward, and thus the operator may still pick up the uterus near the fundus although he may intend to go to the middle of the front wall). In vaginal fixation we must pick up, not the fundus as Dührssen does, nor the inferior segment as Mackenrodt, but the lower middle segment after Mangragalli.

In young women with fixed or adherent retroflexions, ventro-fixation offers security against relapse and freedom in pregnancy; where the uterus is replaceable and the right direction of the abdominal pressure is desired then vaginal fixation may be done, and the round ligament operation has similar indications.

The treatment of pregnant women after hysteropexy is now to be deduced. When a woman has had normal pregnancies before and there are signs of interruption the adhesions must be broken down bimanually, because, as we have seen, they are the sole cause of the disturbance in pregnancy. For general disturbances and dragging on the fixation scar rest and pessaries are useful. When labour comes on, the points to be seen to are the presence of slight inertia, slow dilatation, retarded engagement of the head, and secondary hæmorrhage. With care and judgment all these are easily overcome. The graver conditions are: the cervix is drawn up against the promontory and does not dilate owing to either the fixation or an abnormal presentation. Here we must make out the presentation. If it is abnormal the patient must be kept in bed with the head low, the membranes carefully preserved, and a colpeurynter put in the vagina. The cervix must be drawn into the axis by means of the fingers. If this succeeds the uterine contractions will assist in the dilatation of the os, if it does not then the usual means of dilating the os must be used (Barnes' bogie, dilators, &c.).

If the head presents, we here also draw the cervix forward and help dilatation. When this has taken place, if the head sticks in the pelvis, the forceps are applied, if at the brim version should be done. When it comes to inability to deliver owing to the bulging down of the anterior wall by the presenting part, there is a question of Cæsarean section or division of the cervix *per vaginam*. Dührssen recommends separation of the bladder in front and the division of both lips of the cervix up to the peritoneal reflexion. This accident will happen less and less in the future as the *technique* improves.

The conclusions therefore are that:—(1) Opinion formerly hostile is now in favour of operation; (2) the majority of pregnancies and labours run a normal course after operation; (3) the number of interruptions in pregnancy and of complications of labour may be much reduced by improved *technique* (Mangragalli had none after a sufficiently numerous list of operations); (4) the complications of labour after ventro-vaginal fixation can, in the majority of cases, be easily overcome by prompt and opportune intervention. The operations of ventral and vaginal fixation, whenever strictly indicated (grave disturbances or the impossibility of a prophylactic cure), may be carried out without fear, even when there is a possibility of future pregnancies.

F. E.

The November number of the *American Gynecological Journal* has for its two first articles the subject of "VENTRO-FIXATION OF THE UTERUS."

Dr. Chas. P. Noble deals with its after effects so far as relates to pregnancy and labour. He quotes at length one case in which it was supposed to have given rise to dangerous vomiting in the early months even of pregnancy, leading to the necessity of premature labour being induced in the seventh month. The case is very fully described, but the evidence of its being necessarily caused as suggested is weak. It is further noted as being the only case of the kind on record. The large amount of evidence that Dr. Noble has obtained shows that this operation (which he calls *Suspensio Uteri*) indicates that it has little or no influence on abortion, the percentage not being in excess of that usual in the normal state. He gives notes of two cases where very acute ante flexion of the fundus imprisoning the child at time of labour made it very difficult in the one case, and impossible in the second, and calling for a Porro-Cæsarean operation. He suggests that cases of pregnancy following this operation should be examined from time to time and especially about the seventh and eighth months, and if the cervix be found drawn up out of the pelvis, and more so if the condition above noted can be made out, that labour should be induced from four

to six weeks before full time. Despite his successes and that of others quoted by him, he proposes for the present to adopt in these cases shortening of the round ligaments.

Dr. John M. Fisher, Gynæcologist to the Philadelphia and to the Jefferson Medical College Hospitals, writes as to the value of this operation, but chiefly to note the mode he adopts in the performance of it. He contends that great risk is run by the presence of the buried sutures; that sinuses communicating with these constantly occur. He passes the curved needle, armed with silk, through the entire thickness of the abdominal wall, about a third of an inch from the margin of the wound in the abdomen near its lower angle, piercing the peritoneum and superficial muscular layer of the uterus transversely below the insertion of the tubes to the extent of about half an inch, finally passing it through the corresponding portion of the abdominal wall on the opposite side. A second suture is passed in a like manner a half inch above the first on the abdominal surface and through the corresponding portion of the uterus near its summit. Two more sutures are passed through all the layers of the abdominal wall only to close the opening. The utero-abdominal sutures are tied, thus bringing the intervening areas of the peritoneum covering uterus and abdominal wall into direct opposition. Tying the two remaining sutures closes the operation. All the sutures were removed on the seventh day, and a Smith-Hodge pessary temporarily introduced. Special attention is given to the action of the bowels and bladder. He notes five cases so operated on, all satisfactorily. He considers the value of the pessary in these cases to be secondary only to that of the ventro-fixation. No gynæcological journal would to-day seem complete without an article on extra-uterine gestation. The subject is treated of in the present number of this journal in a paper by Dr. Homer Gage, read before the Millers' River Medical Association. After acknowledging that the fundamental principles of its pathology are now settled to be those enunciated by Lawson Tait in his treatise published in 1888, and bringing forward cases of his own and quotations from other surgeons in further proof thereof, he asks leave to call attention to the clinical symptoms. Noting how rarely the patient is conscious of the fact of being pregnant until, between the sixth and tenth week generally, the sac ruptures, he remarks upon the one or two symptoms whose existence in cases of probable pregnancy ought, he thinks, always to be made the subject of careful investigation. First, irregular hæmorrhage, not the persistence of catamenia, but an irregular, bloody, vaginal discharge, small in amount, at times associated with clots or membranes; secondly, not so frequent attacks of intermittent pelvic pain. He quotes from Parry and Webster the terrible mortality from this condition in earlier years. He

reports in seven cases of his own, with one death, aptly exhibiting the present day satisfactory plan of diagnosis and treatment. One or two of these cases are most interesting, but could only be quoted at length.

W. T.

In the *American Gynæcological and Obstetrical Journal* for December, 1896, is a most thorough paper by G. M. Edebohls, M.D., of New York, on "SHORTENING THE ROUND LIGAMENTS, INDICATIONS, TECHNICS, AND RESULTS." The first part consists of the history of Alexander's operation, showing that Alquié, of Montpellier, first conceived the idea of shortening the round ligaments; that Deneffe, in June, 1864, made the first attempt at doing so on the living, but failed to find them, and that Alexander did the first successful shortening on December 14, 1881.

This operation is preferred to ventral or vaginal fixation of the uterus, "because the physiological mobility of the uterus remains unimpaired, no peritoneal adhesions being established, because in future pregnancies the shortened round ligaments undergo evolution and involution with the uterus, and no interference, due in any way to the operation, has been observed, and because the anatomical result is a permanent one." It is indicated "whenever and wherever it will meet the indications, as well as or better than one of its rival procedures, *i.e.*, (1) in all uncomplicated cases of retroversion, retroflexion and excessive mobility of the uterus requiring operative treatment; (2) in cases of aggravated ante flexion of the uterus; (3) in cases of retroverted ante flexed uteri without adhesions; (4) in simple prolapse of the ovaries without adhesions, when that condition calls for treatment; (5) in cases of adherent retro-displaced uteri, the adhesions in these cases having first to be separated by anterior or posterior colpotomy, or by median cœliotomy, or by opening the peritoneum at the internal inguinal ring."

Dr. Edebohls considers that for prolapsus uteri this operation is simply adjuvant to plastic work upon uterus, vaginal walls and perinæum, and that the only serious objections that can justly be urged are the occasional occurrence of hernia and of pains in the region of the scar, and in his clear and exhaustive section on technics he points the way by which these may be avoided.

The round ligament is sought for higher up in the canal than at the external ring, since it is stronger at the higher point, and therefore less likely to tear in manipulation; to find it the canal is opened by Dr. Edebohls along its whole length. In drawing out the round ligament, the accompanying ilio-inguinal nerve is carefully separated from it and guarded against division. "This will prevent subsequent pain in and about the cicatrix." As the ligament is pulled out the investing peritoneum, which appears

in the form of an inverted cone, is to be stripped back and so assure the shortening of the ligament between the uterine cornu and the internal inguinal ring. The amount of shortening necessary to be accomplished averages about ten centimetres, certainly not less than seven; the shortening, in fact, should be continued until the index finger, passed down to the bottom of the wound recognises the impact of the cornu uteri at the internal ring when traction is made on the round ligament. His method of re-anchoring the ligaments and closing the wound is as follows:—The suture material for the deep parts is catgut, No. 0, chromicised to resist absorption, a full curved, medium-sized Hagedorn needle is threaded with this and the buried running suture applied according to the following technics. Beginning at the upper angle and inner side of the wound, the first sweep of the needle pierces the aponeurosis of the external oblique, the underlying internal oblique and transversalis muscles, the margins of the internal ring, the round ligament as it emerges between them, and the projecting shelf of Poupart's ligament. The succeeding loops of the deep row of sutures, three or four in number, pierce the internal oblique, the transversalis, the round ligament, and Poupart's ligament; the last loop penetrates the outer pillar of the external ring and so emerges upon the outer surface of the external oblique aponeurosis; with still the same strand of catgut, the inner pillar and the round ligament are pierced and fastened to the outer pillar, and finally the lips of the incision in the external oblique aponeurosis are united with the same strand continued upwards as a running suture. The skin is sutured and wound closed without drainage. Prior to doing this operation, he cures the uterus and does whatever plastic work the conditions presenting in each case call for.

A complete table of 115 cases is given, of which only 4 were absolute failures; 2 of them, however were subsequently cured by vaginal and ventral fixation respectively; 5 others were relative failures due to tearing of the ligaments, on the occurrence of which accident ventral fixation was substituted for shortening of the ligaments.

In the remaining 106 cases, under an average period of observation of nearly seventeen months, the anatomical results have invariably been quite satisfactory. Two inguinal herniæ, both in the same patient, occurred as a result of shortening the round ligaments.

Twelve pregnancies are known to have followed in 8 of the successful cases; of these 2 terminated in abortion, 1 was lost sight of after the seventh month, and 9 ended in safe delivery at term of living children.

Appended to the paper is a copious bibliography.

J. F. J.

PLASTIC PERITONEAL OPERATIONS IN CONNECTION WITH VAGINO
FIXATION OF THE UTERUS. By RISSMANN. *Berl. kl. Wchns.*
xxxiii., 29, 1896.

The author has found, by experiment on animals, that under perfect aseptic conditions serous surfaces in contact with each other for a certain time grow together, and that sero-serous adhesions, between organs that are moveable or vary in size with their contents, may separate, and actually do so unless they have been caused by infection or by rude injury of the peritoneum.

The solidity of sero-fibrous adhesions is very much greater than that of sero-serous. In operations for retro-deviations of the womb in women not past child-bearing, it is essential that the uterus should be given play-room enough for its development, and this is best secured by Olshausen's method of ventro-fixation; the Czerny-Leopold operation being likely to lead to sero-fibrous union. In vaginal operations Mackenrodt's first method, without opening the anterior peritoneum, fulfils the condition mentioned, provided that infection, which is by no means uncommon, does not occur. To ensure complete and continued approximation of the peritoneal surfaces at least two stitches to every 2 mm. of the serous surface are necessary, and then the bladder should be kept quiet for the first two to three weeks. The more recent proposals of Mackenrodt (vesico-fixation) and Dührssen promise less satisfactory results. In women past or near the menopause, it is better to fix the uterus directly to the vagina.

THE CURRENT TREATMENT OF RETROFLEXION. By FLAISCHLEN.
Samml. Zwangloser Abhandl., i., 3. Halle, 1896.

The treatment of retroflexion is to be decided entirely by the amount of trouble to which it gives rise. No operative or even orthopædic measures are justifiable until it is certain that the complaints of the patient actually depend on her retroflexion. As regards pessaries Fleischlen prefers Hodges' and Thomas'. Reposition is to be tried first bimanually, then if necessary with the aid of the sound. For operative treatment the ventral methods have great advantages over the vaginal. The retroflexion may be (1) moveable or (2) fixed.

(1) In virgins moveable retroflexions seldom require local treatment; if they do and the vagina proves too narrow to carry a pessary, the Alexander-Adams operation is the most suitable. In women who have borne children moveable retroflexion is incomparably more common, and the longer it has existed the longer, as a rule, must the pessary be worn; but pessary treatment may effect a permanent cure even in cases that have

existed a long time. Amputation of the portio in cases of chronic metritis, takes away the part a pessary acts upon, and should not be practised. The operative treatment of mobile retroflexion should only be adopted after protracted treatment by pessary has effected no permanent correction of the position of the uterus, and when the troubles persist if the pessary be removed and the patient urgently desires to be relieved from wearing it, Flaischlen recommends shortening and fixation of the round ligaments as the most suitable operation in most cases before the menopause, or if the case is complicated by prolapse, ventrofixation:

(2) Even in fixed retroflexion operation is not indicated unless the sufferings of the patient are actually due to the displacement, and all active interference must be postponed till any acute inflammation has subsided. Bimanual reposition must be tried, if necessary, under an anæsthetic. Parametritic cicatrices preventing reposition are best treated by massage. Schultze's method does not, unfortunately, succeed in all cases, but in the exceptions, ventrofixation will remove all trouble, and when properly effected the uterus is not only freed from its adhesions and its position permanently corrected, but is elevated to an extent that relieves the traction on its ligaments and on the pelvic peritoneum. Ventrofixation, under some circumstances, also cures sterility.

J. J. M.

A METHOD OF CURING PROLAPSE OF THE UTERUS. By Professor GUBAREFF, of Ureff. *Vratch*, No. 13, 1896.

After having amputated the hypertrophied cervix, if this be necessary, he prevents the prolapse of the uterus by the following method of submucous suturing which is carried out with a straight needle and silkworm gut sutures. About the level of the anterior fornix the needle is introduced into the submucous cellular tissue transversely and to one side, and is brought out 3 ctm. away. Then the needle is re-entered at this point of exit and carried longitudinally down to about the middle of the anterior vaginal columns, and being brought out, is re-entered at once to pass transversely out parallel with first course; it is then again entered and brought out at the original puncture. Thus a four angled track is formed which has been followed by the needle and suture in the submucous cellular tissue of the anterior vaginal wall. Exactly the same procedure is carried out on the posterior wall. When the second suture has been passed, both are drawn tight, and upon this the uterus as drawn up is fixed in position. The operation is painless and requires practically no convalescence. The sutures can be passed differently according to the conditions in different cases. In this way the various plastic operations may be avoided.

This method enables the patient to bear children afterwards without difficulty, which is not the case with Freund and Jacob's operations, after which the author has had to cut out the circular fixing suture so as to remove obstruction to delivery.

ON THE PRESENCE OF MICROBES IN THE VARIOUS PORTIONS OF THE FEMALE GENITAL CANAL. By STROGANOFF. *Journal of Obstetrics and Gynecology*. *Vratch*, 1895, No. 40.

Stroganoff collects and compares the recent work of different authors with his own work and conclusions in his dissertation of 1893, and points out that the discrepancies in various particulars are due to the various methods of investigation.

He demonstrates that the methods of investigation of the leading workers (Winter and Walthard) were lacking in precision; for instance, Winter's method allows the diffusion of microbes from without into the cervix at the very moment of experiment, and by Walthard's method the cervical mucus is removed or lessened and therefore the bactericidal action of the mucus is weakened. Beyond this the latter method facilitates, by its mechanical conditions (the introduction of a tubular speculum), the introduction of microbes into the vagina. Seeing that the methods of investigation are themselves insufficient, it is impossible to expect true and sufficient results. Hence the conclusions of the above authors, which differ from those of Stroganoff, cannot disturb the position previously taken by him that (1) the cervix of both pregnant and unpregnant healthy women does not usually contain microbes; (2) the region of the external os defines the boundary between the microbe bearing and the non-bearing regions; (3) the cervical mucus destroys microbes.

F. E.

In the *American Journal of Obstetrics and Diseases of Women and Children* for November, 1896, there is a short paper by Dr. Baldwin, of Ohio, on "TREATMENT OF THE STUMP TO PREVENT ADHESIONS." He thinks that the danger of adhesions lies chiefly in the presence of the raw end of the stump left after removal of tumours, pus tubes, &c., or in the presence of raw surfaces left after enucleating growths or masses from the pelvis. In the removal of ordinary ovarian tumours, having a pedicle of greater or less size, one of two procedures can be resorted to. If large, it should be clamped as high up as possible for the temporary control of hæmorrhage and the tumour removed, then the peritoneum on either the anterior or posterior surface of the flap should be dissected down so as to obtain a flap, the pedicle is ligated in sections at the base of, but not including, the flap, the portion of pedicle above the ligature is cut off, and the raw sur-

face, including the ligature, is covered by the peritoneal flap. If the pedicle is small it is tied in the usual way, keeping the ends of the ligature, however, always on the anterior face, and the raw end of the stump is covered by rolling it against and under the posterior surface of the broad ligament; this is done by passing the ends of the original ligature through the broad ligament from behind forward about half an inch apart and tying them. The raw surface of the stump is thus covered by the broad ligament. Adhesions form at once.

Also in the same journal is a report of extra-uterine pregnancy occurring twice in the same patient, by L. E. Frantenthal. His case is the thirteenth on record. His personal experience includes thirty-seven cases, and some of his conclusions are:—

(1) Impregnation occurs in the tube. (2) In the majority of cases the etiology can be established by a mechanical hindrance to the passage of the fecundated ovum from the tube to the uterine cavity. (3) Treat conservatively only those cases seen some time after primary rupture, where you are fairly certain of the death of the foetus, where the alarming symptoms have subsided, and presumably absorption is going on. (4) The operation during shock is not contra-indicated, for the removal of the foreign body from the peritoneal cavity removes shock. (5) Drainage, preferably vaginal, should be done in all cases. T. J. Watkins in criticising the first conclusion does not think it plausible to believe that spermatozoa normally pass into the tubes, because a valve-like formation of the endometrium normally obstructs the entrance into the tubes, the ciliary movement in the tubes is towards the uterus, the uterine end of the tube is too small to permit a fecundated ovum, after slight development, to pass, and because spermatozoa have been found only in very few instances in excised tubes. He thinks that the conditions predisposing to ectopic gestation are injury or absence of the valve-like formation of the endometrium, injury or absence of the cilia in the tube, and enlargement of the proximal end of the tube such as exists soon after miscarriage and labour.

Elisha Boland in reporting five cases of operation for ruptured tubal pregnancy, all successful, offers the following postulates:—Ectopic gestation is more common than has generally been supposed, and intra-peritoneal hæmatocele is almost always the result of a ruptured tubal pregnancy.

We find also from this number that Leopold reported at a meeting of the Dresden Medical Society, June, 1896, a most interesting case of deciduoma malignum. History as follows:—Delivered June 25, 1895, puerperium normal, three months after delivery menses reappeared, and from that time she had irregular menstruation every two weeks. When seen first she was in a condition of extreme anæmia, pulse 160, feeble, extremities cold.

Uterus pushed to right side and enlarged, with a doughy mass to be felt behind it. The quick, feeble pulse and extreme anæmia had only come on in the last few days.

On opening the abdomen two litres of dark fluid blood escaped. The anterior wall of the fundus uteri showed six to eight dark-bluish protuberances, one of which by its rupture was the source of the hæmorrhage. An elastic ligature was placed round the cervix, and the uterus was removed. The uterus on examination was found to contain a soft mass, which had grown into and penetrated the muscularis. The diagnosis of deciduoma required confirmation by microscopical examination.

J. F. J.

A CASE OF OVARIAN CYST RUPTURED BY VIOLENCE. By Dr. BOGDANIN NOWINY LEKARSKIE. *Vratch*, August, 1896, No. 45.

The patient, aged 22, consulted a physician in August, 1895, who made out that she was in the second half of pregnancy. In January, 1896, the patient fell and struck the abdomen, when a severe pain came on and was taken for labour pain. The midwife who was called sent the case to the maternity.

Patient is of slender build. No serious conditions to be made out. Menstruation came on at 14, and was regular every four weeks. Never been pregnant. In June, 1895, hæmaturia occurred every eight days, and since then menstruation has ceased. The abdomen began at the same time to enlarge, which caused the patient to seek medical advice. Circumference at umbilicus, 126 ctm., between navel and tip of xiphoid process, 123 ctm. Palpation and bimanual examination fail to discover any tumour. Distinct thrill. The uterus not enlarged. Internal organs sound. Urine, dark green, acid, sp. gr. 1.023, no albumen. Deposit of uric and phosphatic salts. With a trocar twenty litres of thick, dark red fluid, containing red and white blood cells, were evacuated. After this it was possible to feel a moveable tumour with a rough upper surface extending from the left side of the pelvis. Combined examination showed this tumour to arise from the left ovary. Abdominal section proved that the tumour did arise on this side, the uterus small and the right ovary not enlarged. The tumour was a large cyst; on the front wall was a tear 17 ctm. long, and in the back another of 6 ctm. On the internal surface of the ruptured cyst was another cyst, 40 ctm. in diameter, which carried numerous smaller cysts on its surface again.

In this case the cyst was mistaken for pregnancy, as has been the fact in similar cases before this. The author suggests the possibility of similar mistakes. In this case, for instance, there was the fullest inquiry into pregnancy, the cyst wall was

continuous with the uterine wall, and the consistence of the contents varied at parts, and there is every possibility of a mistake unless a vaginal examination is made.

Rupture of ovarian cysts is fairly common, and from recent literature it would seem to be accompanied generally by a favourable issue.

F. E.

At a meeting of the Cincinnati Obstetrical Society of May 14, 1896, papers were read by Drs. Johnstone, Wenning, and Reed on "DERMOID TUMOURS OF THE OVARY."

Dr. Johnstone dwelt especially on their etiology and pathology. After reference to the first class of dermoids, those found near the median raphe and in the various cavities near it, he proceeded to discuss the second class, ovarian dermoids. He and others working with him have come to the conclusion that this form of dermoid is a true parthenogenesis, that is, "that the ovum itself is at fault, and that, instead of losing one of its polar cells, it retains the male element from some pathological reason and goes on in a weak way in an effort to form the human body." "There is not a tissue within the body that has not been found within these dermoids." He had previously shown a fairly well formed heart, with mitral valve, as well as half the tongue, in separate specimens. The trachea and the eye have also been found. From the work of Bland Sutton it is clear that dermoids of the ovary are never found in any other part of the pelvis than that where Graafian follicles are formed. Dr. Johnstone thought that if dermoids were a doubling-in of the mother's own membranes we should expect to find them in the hilum of the ovary, and that such a thing was almost unheard of, and therefore they are not the remnants of the mother's own foetal life. "The same pathological process that starts the hypertrophy of the ovary which results in ovarian tumours, catching many of the follicles in different grades of development, finds some of the ova contained in these follicles that have not lost the polar cell and are still adherent to the Graafian follicle. This hypertrophic growth arrests the development of the ovum, holds it fast to the cyst wall, and does not allow the little cell to follow out its physiological law and get rid of one element. This being retained and receiving food and nourishment, in an irregular way attempts to follow out its own natural history, and a dermoid is the result."

Dermoids easily get infected, and suppuration in them is far more common than in any other class of ovarian tumours, and for these reasons they are among the most dangerous tumours that a woman can have.

Dr. Wenning dwelt on "Their Clinical History," but at the outset agreed with Dr. Johnstone as to their etiology and patho-

logy. They are, as a rule, single, but occasionally double, and are not infrequently associated with colloid cysts. Dermoids have been found simultaneously in localities at a distance from the site of the original growth, and some must be attributed to metastasis. They occur at all ages, and constitute the most frequent variety in very young children. They may remain dormant in the body for many years, but may, however, increase suddenly when either the ovary or other contiguous structures are subject to some irritation, as at the times of puberty, marriage, and pregnancy. They have a greater tendency to torsion of the pedicle, and from their liability to suppuration may terminate by rupturing into other organs in the vicinity.

Dr. Reed discussed "Their Diagnosis." "The accurate differential diagnosis of dermoid cysts of the ovaries before operation is of comparatively little importance." Their general physical features, their anatomical relations, the necessity for their removal, involves the same principles in the *technique* of operation as ordinary cystoma. The shape of the tumour is of negative diagnostic value, if multinodular; so are multilocular cysts, and even soft fibroids; if spherical, so may a unilocular cyst be. Fluctuation is of questionable value. The so-called "doughy feel" is never present before removal. Pain is one of the leading symptoms, located in the tumour itself, whereas in fibroids it is generally of a reflex character. They are notoriously of slow growth, at the same time often irregular in growth, that is, they develop to a certain point, become stationary for a time, and again become active.

J. F. J.

ON THE INTERNAL SECRETION OF THE OVARY. A Study by
DRS. CURATULLO and TARULLI. *Annali di Ostetricia e Ginecologia*, October, 1896.

This is a clinical and experimental study of the subject, and although the matter has been worked up a good deal of late, yet there is very little known beyond broad general principles. Of the physiological chemistry involved we know almost nothing more than the increase or decrease of certain elements in the excretions permits us to guess.

Semiramidis, Queen of Assyria, is said to have been the first to cause the sexual glands to be removed, and Nebuchadnezzar had all his prisoners of war castrated before using them as servants. The priests of Diana of Ephesus were obliged to be castrated. Among Christians Valesius founded a sect which held castration indispensable before becoming a priest. The Hottentots had a custom of removing one testicle to render themselves more speedy in running. The ancients used to remove the ovaries of young girls so that they might retain their

youthful state for a long time. Aristotle, Pliny and Galen all mention the castration of female animals such as sows. The notion that eunuchs were relieved from attack by certain diseases is shown by Hippocrates, "Eunuchi non laborant podagra." The priests of Cibeles treated mama by castration. Galeno advised it specially for leprosy, and in the 17th century it was practised for many diseases.

In our time castration of women has been extensively practised; for instance, by Kelly for severe uterine colic coming on at every menstrual period; by Lawson Tait in menstrual epilepsy, in hystero-epilepsy and in hysteria.

Spencer Wells has strongly decried this excessive use of castration. Some have practised castration to procure sterility and prevent the reproduction of hereditary mania, and Keppler at the 1891 Berlin Congress came to the conclusion that "matrimony with a castrated woman is the ideal type of Malthusian matrimony, and is the sole manner of practising Malthusianism without compromising the health and happiness of the parties concerned."

Ablation of the ovaries has given good results in fibrous tumours of the uterus, before the *technique* of extirpation had been worked up by Martin and others to its present state. This was advised by Battey in America, Hegar in Germany, and expanded by Lawson Tait taking the tubes away also, and it has acted by stopping the chief symptom—the hæmorrhage. But it is in osteomalacia, a disease whose pathology is still obscure, that ovariectomy is at present attracting most notice, because all other remedies have failed and this seems to offer relief.

The Influence of Ablation of Ovaries upon the Metabolism of the Organism.

Hegar from his work on sows, published in a monograph in 1878, came to the conclusion that the ancient aphorism "Propter solum ovarium mulier est quod est" is not sustained if it is taken to mean that from the ovary there arises the force which determines the special type of the female body and its special sexual character.

The animals upon which the authors have experimented were bitches and the female *mus musculus*. The first are very easily catheterised, and thus the amount of urine passed in twenty-four hours is obtained, while the second on account of their small size are available for researches on the products eliminated by respiration, Luciani's apparatus being used. The ovaries were removed carefully and examined minutely to be sure that the whole gland was taken away, and further examination was made to make sure of the absence of any supernumerary

ovary. There are tables given of the urinary excretion in three bitches after castration. The date, the weight of animal, and the amount of urine, the nitrogen and the phosphoric anhydride eliminated in twenty-four hours are given.

The method of investigating the effect on the respiratory products are set forth in detail with description of the apparatus, and the authors come to the following conclusions: (1) Ablation of the ovaries determines a notable influence on the organic metabolism; (2) The curve formed by the phosphates eliminated by the urine after castration depresses considerably. This depression is not due to the alimentation which is the same both before and after the castration, nor, on the other hand, to diminished power of absorption of the intestine, because the conditions of the gastro-enteric tube remain intact after ovariectomy; there is no disturbance of the intestinal tract and the body weight always increases. Examination of the fæces confirm these statements. (3) The curve of nitrogen eliminated after ovariectomy, and tested by the method of Kjeldahl or of Yvon shows isolated oscillations without any decisive tendency to rise or fall. (4) After castration the carbonic acid eliminated by respiration and the oxygen absorbed diminish notably up to a certain limit, then they maintain themselves stationary in these proportions. (5) After castration the body weight rises gradually to a considerable extent for the time during which the animals were under experiment (five to six months). (6) In castrated bitches in which there had taken place a remarkable diminution in the elimination of phosphates, injection of a certain dose of ovarian juice subcutaneously leads to increase in the phosphates eliminated, which surpassed those of the period before castration; injection of greater doses lead to still larger elimination of phosphates. This increase is not proportioned to the amount of phosphates in the ovarian juice injected. (7) Removal of the uterus with the ovaries does not seem to have any more influence than was observed after simple removal of the ovaries.

Clinical and Experimental Facts which Demonstrate the Internal Secretion of the Ovary.

After castration the respiratory action is slower, but the respiratory quotient, that is, the relation between the oxygen absorbed and the oxygen eliminated as CO_2 , remains unaltered. After ablation of the ovaries in mice there is a lowering of all the complex material dynamic action without any saving of one rather than another of the three groups of ingested substances. Great interest rests on the phenomenon that the secretion of phosphates after castration is diminished, and increases when

ovarian juice is subcutaneously injected. This shows that ovarian secretion causes increased oxidation of phosphorus and explains the good results obtained by castration in cases of mollities ossium.

Fehling's theory is that mollities ossium is due to exalted ovarian functionality, which induces reflexly spasm of the vasodilators or paralysis of the vaso-constrictors of the medulla, and consequently an increased resorption of calcareous salts, specially those of the pelvis.

He says that osteo-malacia is a true reflex trophoneurosis of the osseous system, having its focus of reflexion in the ovary, and that it offers analogies with Pacedow's disease and with other trophoneuroses.

He supports his theory of ovarian hyperactivity by the following arguments:—(1) The manifest exacerbations of the malady in correlation with the menstrual periods. (2) The surprising rapidity with which the osseous troubles diminish after operation. (3) The particular state of the uterine adnexa as seen on abdominal section in osteomalacian patients, the richness in veins and arteries and vascular ectasia. (4) The striking fertility of osteomalacic women, which fertility, the author says, is due to the exalted functional activity of the ovaries.

Zweifel says that castration is not necessary, and that only prevention of conception is required. This is done by ligaturing the Fallopian tubes.

Schanta says that cessation of menstruation is the true curative factor, and therefore either removal of the uterus or the appendages will effect the cure.

The discussion is followed out to great length and with many quotations, and those specially interested should see the original article. The author's come to the following theory after their experimental work and clinical observation:—

The ovaries have, like other glands of the system, according to Brown Sequard's general law, an internal secretion. This is passed constantly into the blood, its chemical constitution is quite unknown, while its most essential characteristics are those of favouring oxidation of organic phosphorised bodies, of hydrates of carbon, and of fats. Hence it follows that whether by removal of the ovaries or of their function, as before puberty and after the climacteric, there ought to be, on one hand, a greater retention of organic phosphorus, and thus a greater accumulation of calcareous salts on the bones, and on the other, the well-known phenomena of obesity following on castration or the menopause.

There is a brief reference to the attempts at production of osteomalacia experimentally by organic microbes. This has

failed, and at present there is not much evidence in favour of the causation of osteomalacia by germs.

THE POSSIBILITY OF GROWTH AND ACCLIMATISATION OF TRANSPLANTED OVARIES. By E. KUANER. *Centralblatt für Gynäkologie*, May 16.

Dr. Kuaner, at Professor Chrobak's invitation, carried out some experiments upon the above subject as regards various parts of the body. The experiments were made upon rabbits. Of these rabbits three died from extraneous causes, about three to six months after the operation, and were opened by the author. In all the ovaries had grown into those parts wherein they had been placed. Some part of the ovary had undergone fatty degeneration, but the greater part remained unaltered, and perhaps more active in its functions. This functional activity is evidenced by the appearance of ripe and ruptured Graafian follicles on its surface. The experiment of transplanting ovaries was thus without disturbance, and shortly afterwards a network of vessels formed about them. The author, therefore, concludes that : (1) in rabbits transplantation of the ovaries is completely possible into places foreign to, and differing from, their original site ; (2) ovaries become acclimatised singularly well, if they are only placed in the abdominal cavity or anywhere among muscles ; (3) ovaries thus growing in a new place receive proper nourishment and functionate properly, as is seen by the presence of ripening, and even rupture Graafian follicles.

F. E.

ANASTOMOTIC TUBE OF PROFESSOR CHALOT (OF TOULOUSE) FOR TRANSPLANTING THE URETERS.

M. Chalot uses a special tube which he has designed for transplanting the ureters into the bladder or intestines when it has been necessary to remove large masses of diffuse cancerous tissue from the uterus, after tying the two internal iliac arteries (details of which may be found in an article by Prof. Chalot in No. 38 of the *Indépendance Médicale* of Paris, 1896).

This tube is in nickelled copper of a cylindrical form, tapering slightly at each end. Its dimensions for the adult is $3\frac{1}{2}$ cm. (about $1\frac{3}{8}$ inches) in length by a median width varying from 5 to $3\frac{1}{2}$ mm. (about $\frac{3}{16}$ to $\frac{1}{8}$ inch.) (The figure No. 1 represents the three sizes in their actual dimensions). The lumen of the tube is of a uniform size throughout its length, being of a diameter of 3 mm. (about $\frac{1}{8}$ inch) $2\frac{3}{8}$ mm. and $2\frac{1}{8}$ mm. for the three sizes respectively. It presents at its surface a

circular groove at $1\frac{1}{2}$ cm. from one extremity and 2 cm. from the other. It is upon the shorter end of the tube that the renal extremity of the ureter is inserted in such a way as to protrude over the circular groove for a short distance, so as to secure it upon the groove by means of a fine silk ligature. The long end of the tube (latest modification) is provided with about ten holes, one of which is placed at the end, to which is attached a silk thread for the purpose of either guiding a sound over the tube, and later on withdrawing tube and sound together, or of only withdrawing the tube when there is reason to think that the circular ligature has completed the ulceration through the ureteral stump and thus rendered the tube free. The ureter then remains firmly fixed by the plastic adhesions in the visceral wall into which it has been inosculated. The tube may also be left to itself. A small index which can be observed through the wall of the ureter is soldered immediately above the circular groove to facilitate placing the silk thread exactly in the groove. Naturally, for children, the anastomotic tube is of smaller dimensions.

M. Chalot further observes at the end of his article that, without considering it indispensable, this tube is most useful to facilitate and simplify the anastomosis of ureters with any organ. The patient in whom he thus implanted the two ureters in the rectum on July 22, 1896, continues (October 16) to enjoy good health. She has only one or two evacuations in the night, and two or three in the daytime without any pain. Since the month of July M. Chalot has had the opportunity of employing his tube on two occasions for uterine cancers, and once for exstrophy of the bladder. It is evident that it can be utilised for other applications, such as extirpation of the bladder or of the prostate gland, in uretero-vaginal fistula, &c.

P. Z. H.

THE RESULTS OF THE USE OF MASSAGE IN THE VARIOUS DISEASES OF THE FEMALE GENITAL ORGANS. By RUBENSTEIN (St. Petersburg Dissertation). *Vratch*, 1896, No. 10.

Rubenstein has observed a hundred cases and he comes to the following conclusions as to its application in the different diseases:—

(1) Cicatricial parametritis: Here massage affords a very powerful and in many cases the only successful means of treatment. Massage is directly indicated, on account of its certainty and celerity of success, whenever one or more distressing symptoms are present involving this or that organ or some part of it. Gonorrhœa does not constitute a contra-indication to the use of

massage under the above conditions. Under the influence of massage before everything they lose the painful sensations, and following this the distressing pressure feelings.

(2) Exudative parametritis: In this kind of disease massage forms a good means of treatment, but its usefulness is limited by the duration of time required to attain its aim and by the care which it is necessary to use in selecting cases for massage so as to exclude those in whom exacerbation may occur. Hence the author considers that massage should be carefully avoided when (a) the swelling is distinctly thick in comparison with its extent, and (b) there is increased temperature. Likewise all more or less extensive swellings are unfavourable for massage treatment.

(3) Immoveable retroflexion of the uterus: Here massage is a sound treatment. Those cases give the best success in which it is possible to reach the fundus uteri with the external hand in combined examination. After rectification of the uterus, the massage should be continued some time. The introduction of a pessary often speeds the recovery. In those who have not had children this condition of fixed retroflexion gives only a weak indication for reposition of the uterus.

(4) In displacement back and to the side, the same remarks are applicable as in 1 and 3.

(5) Inflammation of the ovaries and the adjacent peritoneum (periöphoritis): Massage is very good in oöphoritis, especially when the ovaries are fixed, but the results are very slow.

(6) Chronic inflammation of the uterus and hypertrophy of the cervix are neither of them suitable for massage.

(7) Subinvolution of the uterus after labour yields to massage very kindly, but the treatment must be continued some time—on an average one and a half months.

(8) Amenorrhœa: Massage in certain cases will lead to complete re-establishment without pain, and as a rule permanently.

(9) Chronic endometritis is not suitable for treatment by massage.

(10) Mobile retroflexion of the uterus is not very answerable to massage, but in certain cases of this condition it constitutes a good method not too heroic and fairly successful, and in these cases the indication for further treatment is to be found, according to the author, in the subjective feeling of the patient after the preliminary sittings.

(11) In descent and prolapse of the uterus and vagina, and likewise in (12) vaginismus, massage is of no use, and in the latter is absolutely contra-indicated. As regards other diseases of the female genitals and the use of massage in them—for instance, menorrhagia, dysmenorrhœa, local salpingitis and vaginitis—the variety of their causes and the insufficiency of observation prevented the author from arriving at any practical conclusions.

In conclusion, he decides from his observations that (1) massage is a very beneficial agent in the case of out-patients, although not under its most favourable conditions; (2) massage ought to be tried in the poor out-patient class and especially in country practice; (3) the number of sittings varies from ten to twenty of from four to six minutes' duration, and spread over two to four weeks; (4) massage of the female genitals is always performed bimanually, and as practically nothing more is required, it is within reach of every medical man.

F. E.

VAGINAL CÆSAREAN SECTION. By DÜHRSSSEN. *Karger Gr.*, 8vo, pp. 528, Berlin, 1896.

Dührssen gives the above name to the following operation:—On November 26, 1894, he performed vagino-fixation with anterior colporrhaphy, amputation of the portion and Hegar's colpoperiniorrhaphy on a woman of 31 who had had four children, on account of prolapse and backward displacement of the uterus. She was taken into the clinic for delivery on April 23, 1896, her last menses having been in July, 1895. The child's head was in the left iliac fossa, its pelvis upwards to the right. Her pelvis was normal, the vaginal portion was elevated, the os closed, and the anterior vaginal wall drawn up like a funnel. On account of the extensive way the uterus had been stitched to the vagina, deficient dilatation of the os and an abnormal shaping of the uterus was to be expected when labour set in, and on April 24 he opened the womb from the vagina. After opening the posterior fornix and detaching the peritoneum from the posterior wall of the vagina and uterus (during which it was torn), he then, having previously inserted ligatures, divided the posterior wall of the cervix. In the same way the anterior vaginal wall was opened, the bladder detached without any cutting, and the anterior wall of the womb divided after the ligatures were inserted. The membranes, which then became very prominent, were ruptured after the speculum had been withdrawn, and by podalic version a slightly asphyxiated boy of 4,750 grms. was extracted by the left foot; the afterbirth followed immediately, and there was no subsequent hæmorrhage. The uterine cavity was plugged with iodoform gauze, the wound of the uterus closed by interrupted, and the peritoneum and vaginal wounds with continuous, catgut suture. The course of child-bed was essentially normal, the highest temperature being 38.4°.

Dührssen has in the same way and with no greater difficulty removed a ruptured uterus directly after labour from a secundæpara with a normal pelvis. Onset of labour and discharge of

the waters at 6 p.m., February 29, 1896, at 10 p.m. version from the second transverse position, with prolapse of the lower arm and cord. In attempting to detach the placenta the attendant detected a rupture of the right side of the uterus. The after-birth was taken away by Dührssen at 12.15, and the uterus then removed under an anæsthetic by amputation after the application of Doyen's clamps (the uterus was tipped over backwards). The clamps, removed after sixty-four hours, were re-applied for hæmorrhage, and the last one not finally removed till the 7th day. Recovery was otherwise uninterrupted. Of course, this operation of Dührssen's cannot be performed in much contracted pelvis, but he thinks it indicated the following abnormalities of the neck and lower segment of the uterus :—(1) in cancer of the cervix, when the uterus should be at once removed if the case be operable, and even if otherwise, may be so as a palliative measure; in myoma of the cervix or lower section of the uterus (total extirpation may be desirable in myoma of the corpus); in cases of rigidity of the entire cervix (especially in vaginal prolapse); in contractions of the cervical canal and of the vaginal portion; (2) in conditions endangering the life of the mother which will be removed or alleviated by emptying the womb, such as œdema of the glottis, goitre, bronchitis, pneumonia fibrosa, pulmonary tuberculosis, cardiac diseases, eclampsia, uræmia, and in premature detachment of the placenta in kidney disease; (3) in dangerous, and probably fatal, conditions of the mother, the child being alive and viable, such as pulmonary tuberculosis, cerebral disease, extensive burns, and severe poisoning. The operation should be performed before the agony commences.

THE SUTURE OF RECENT PERINEAL LACERATION. By APFELSTEDT. *Münch. med. Wchns.*, xliii., 25, 1895.

Apfelstedt advocates Veits' proposal of confining the suture to the perineum, on the ground that needle-holes in the vagina or rectum favour infection of the wound; too many stitches destroy too much tissue; and when they are knotted a cavity is likely to be left in the wound. To each thread of silkworm gut or silk he uses two needles, which are inserted where the wounded surfaces meet, so as to emerge near the edge of the perineal wound. The first needle is passed 2 mm. below the junction of the two wounded edges of the mucosa, and the lowest in the same way 2 mm. above the point where the edges of the wound in the rectal mucosa meet, the lines of the stitches spreading towards the perineum like a fan. From six to eight threads are enough. The middle ones are drawn quite tight, the others but

moderately so, before being knotted. As assistant in the Göttingen Clinic Apfelstedt has used this method since 1892. All the vagino-perineal lacerations healed, and three out of four total lacerations; the fourth was in a case of eclampsia.

J. J. M.

In the *American Journal of Obstetrics and Diseases of Women and Children* for October, 1896, is a very thoughtful and clearly written paper by Dr. L. H. Dunning of Indianapolis. At the outset a note is struck against the school of gynæcologists who extend the method of panhysterectomy to all obscure cases of pelvic disease which, though mildly inflammatory in character, do not result in suppuration. A pertinent inquiry is made as to whose experiences have been examined in arriving at the conclusion that the extirpation of suppurating tubes and ovaries in appropriate cases is not effective in curing the patients. A record is given of 116 consecutive cases operated on by him for purulent accumulations in the appendages by their removal. Of these seven died, ninety-seven completely recovered, and only three had septic uteri which ought to have been removed by hysterectomy. Preference is given to abdominal hysterectomy, when necessary, over vaginal hysterectomy. By vaginal hysterectomy "pus tubes are more prone to be ruptured, and not infrequently some of the most important and deleterious features of the case are not discovered, such as adherent and obstructed intestines, the presence of perityphlitic abscesses and of tuberculous peritonitis."

"The mortality of abdominal hysterectomy is quite as low as when the lower method is employed." It is pointed out that only dire necessity can justify the wanton sacrifice of the central organ of a system, even though, at the time, its office in the economy cannot be determined. Marked disturbances in the individual, persisting for months, may be for years, follow extirpation of the organs of the female reproductive system during the period of their functional activity. The extirpation of neoplastic and suppurating uteri are "life-saving operations" in proper cases, but because one or two of the reproductive organs are diseased, that all should be removed is "unscientific, unsurgical and morally wrong." From his experience of eighty-four hysterectomies, he thinks that elderly women bear the operation better than young ones. The majority of cases of hysterectomy for gross uterine disease get gradually better, yet "in many cases there is a greater or less disturbance of the nervous system," and especially is this greater in young women than when the appendages alone are removed.

His conclusions are as follows:—Hysterectomy is useful "in

a small percentage of cases of bilateral suppuration of the tubes and ovaries in which the uterus is distinctly septic, and in cases of septic uteri which cannot be cured by other means after bilateral salpingo-oophorectomy."

Hysterectomy is opposed in inflammatory diseases of the pelvic tissues upon the following grounds, viz.:—(a) "The uterus is the central organ of the reproductive system." (b) "It is only in rare cases that the uterus is so far diseased as to resist appropriate treatment." (c) It "profoundly affects the nervous system and emotional nature of young women." (d) For anatomical reasons "the vagina is shortened, the anatomical relations of the bladder, sigmoid, and rectum are changed, the elasticity of the pelvic diaphragm is greatly diminished or entirely removed, the elastic tissue being replaced by sensitive scar tissue." (e) "It often disturbs the sexual relations of husband and wife, and is apt to induce mental depression." (f) "It compels the use of drainage because of the necrosis of tissue and suppuration induced."

J. F. J.

EDITORIAL.

WE have much pleasure in congratulating Dr. Cullingworth and the Obstetrical Society on the fact of his becoming its President. The esteem in which he is held by the profession was made abundantly evident somewhat recently in an unusually marked manner. His attainments, his great surgical experience and his general breadth of view eminently fit him for so important a post—one which, we are sure, he will elevate and adorn.

* * * *

The rapid progress that gynæcology has made, and is making, is nowhere more evident than in the large amount of literature that emanates from many quarters, where excellent work is being done. All the principal European countries, America and the Colonies, supply abundant material in the form of special cases and new operative developments, which it is necessary for every gynæcologist to have some knowledge of. It becomes, in consequence, more difficult to adequately record all that is worth noting in the limited space for Abstracts at our disposal. We have felt that some of the papers and discussions would lose their value, if not recorded at some length; and yet it has been clearly impossible to publish in this number many of the interesting abstracts and reviews our collaborators have forwarded us. These we shall hope to publish in our next issue. At the same time, in order to obtain more room for this department, which we regard as a most important one, we have in this number printed the Abstracts in a somewhat smaller type than has been our habit. We have by this means added about ten pages of material to what we should have obtained from the same number of pages of the larger type, and we hope the modification will meet with the approval of the Fellows.

NEW BOOKS, &c., RECEIVED.

(Besides exchangeable Journals.)

- Practical Manual of Diseases of Women and Uterine Therapeutics. By H. Macnaughton-Jones, M.D., M.Ch., M.A.O., F.R.C.S., &c. Seventh edition. London: Ballière, Tindall, & Cox.
- System of Gynæcology. Edited by Thomas Clifford Allbutt, M.A., M.D., LL.D., F.R.C.P., F.R.S., F.S.A., and W. J. Playfair, M.D., LL.D., F.R.C.P. Macmillan & Co.
- Some Effects of a Lack of Muscular Development. By W. Bruce Clarke, M.B., F.R.C.S. (J. Bale & Sons.)
- Remarks on a Series of Thirty Cases of Movable Kidney treated by Operation, with their Results. By W. Bruce Clarke, M.B., F.R.C.S. (Harrison & Sons.)
- Functional Disorders of the Nervous System in Women. By T. J. McGillicuddy, A.M., M.D. Ballière, Tindall & Cox.
- The Year-Book of Treatment for 1897. A Critical Review for Practitioners of Medicine and Surgery. Cassell & Co., Limited.
- Braithwaite's Retrospect of Medicine. Simpkin & Co., Limited.
- The Practice of Midwifery. By D. Lloyd Roberts, M.D., F.R.S. Edin., F.R.C.P. Lond. J. & A. Churchill, 7, Great Marlborough Street. 1896.
- A First Series of fifty-four Consecutive Ovariectomies. By A. C. Butler-Smyth, F.R.C.S. Edin., F.R.C.P. Edin. J. & A. Churchill, 7, Great Marlborough Street. 1896.
- Traité de Gynécologie. Par S. Pozzi. Masson et Cie., 120, Boulevard Saint-Germain. 1897.
- Jahresbericht über Geburtshilfe und Gynäkologie. By R. Frommel. Wiesbaden: J. & F. Bergmann. 1897.
- Aidsto Obstetrics. By Samuel Nall, B.A., M.B., D.P.H. Cantab., M.R.C.S. Eng., Ballière, Tindall & Cox.
- Traitement de l'Avortement incomplet. Par le Dr. Chaleix-Vivie, le Dr. Audebert. Paris: Masson et Cie., 120, Boulevard Saint-Germain. 1896.
- Die Myome des Uterus. Wiesbaden: J. F. Bergmann. 1897.
- Drainage *versus* Radical Operation in the Treatment of Large Pelvic Abscesses. By Charles P. Noble, M.D. Chicago: American Medical Association Press, 1896.
- Monatsschrift für Geburtshilfe und Gynäkologie. Berlin: William & Norgate. 1896.
- The Treatment of Inversion of the Uterus by a New Operation. By J. Furneaux Jordan, F.R.C.S. Birmingham: Hall & English, 71, High Street.
- Un Nouveaux Traitement des Fibromes de la Matrice. Par Mr. le Professeur Howitz. Copenhagen. 1896.
- Total Extirpation of the Uterus. By James Macpherson Lawrie, M.D. London: John Bale & Sons. 1896.
- The Medical Annual, 1897 (Fifteenth Year). Bristol: John Wright & Co.
- Suspensio Uteri with Reference to its Influence upon Pregnancy and Labour. By Charles P. Noble, M.D. New York: William Wood & Co. 1896.
- A Plea for the Early Recognition and Treatment of Puerperal Fever. By John W. Byers, M.A., M.D., R.U.I.; Reprinted from *Lancet* August 22, 1896.
- The Treatment of Eclampsia. By John W. Byers, M.A., M.D., International Congress of Gynæcology and Obstetrics. Geneva, 1896.
- Movable Kidney. By Charles P. Noble, M.D. Reprinted from *Gaillard's Medical Journal*.
- Symphiotomy *versus* the Induction of Premature Labour. By Charles P. Noble, M.D. New York: William Wood & Co., 1894.

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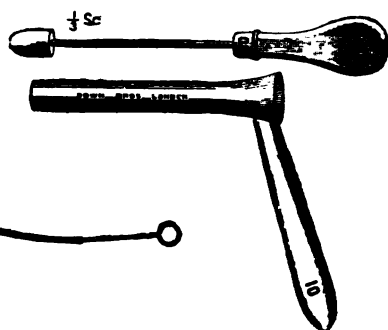
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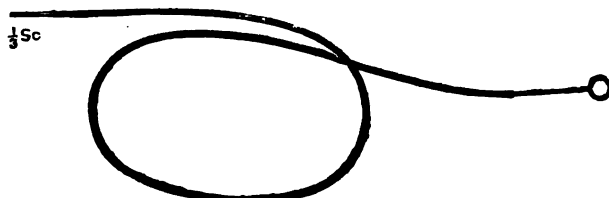
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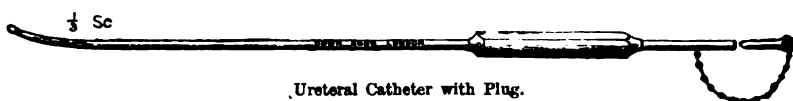
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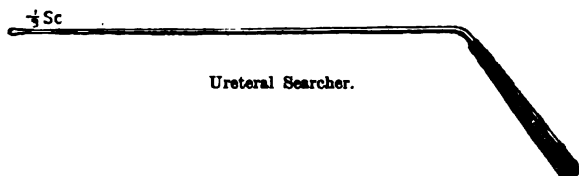
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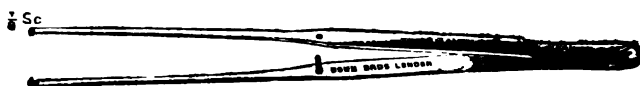
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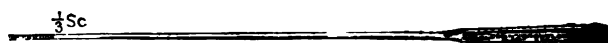
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